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ABSTRACT

This document is the second edition of a guide that is part of a series of performance-based teacher education (PBTE) modules and is intended to help those serving as resource persons in vocational teacher education programs designed around the modules and those serving in that capacity where the modules are used for competency-based staff development (CBSD). The guide consists of an introduction, three chapters, and nine appendices. Chapter 1 defines PBTE and CBSD and explains all elements of the PBTE module series. Chapter 2 spells out the resource person's responsibilities, including planning the teachers' program, guiding the learning activities, and assessing teacher performance. Chapter 3 offers guidance on managing the resource person role, including scheduling, recordkeeping, and improving one's skills. The appendices contain a description of the development of the PBTE/CBSD materials; a master list of performance elements covered by the modules, including one called Combat Problems of Student Chemical Use; module titles and associated performance elements; time estimates for completion of the modules; and prerequisite competencies for the PBTE modules. (CML)

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Resource Person's Guide . . .

to Using Performance-Based Teacher Education Materials

Second Edition

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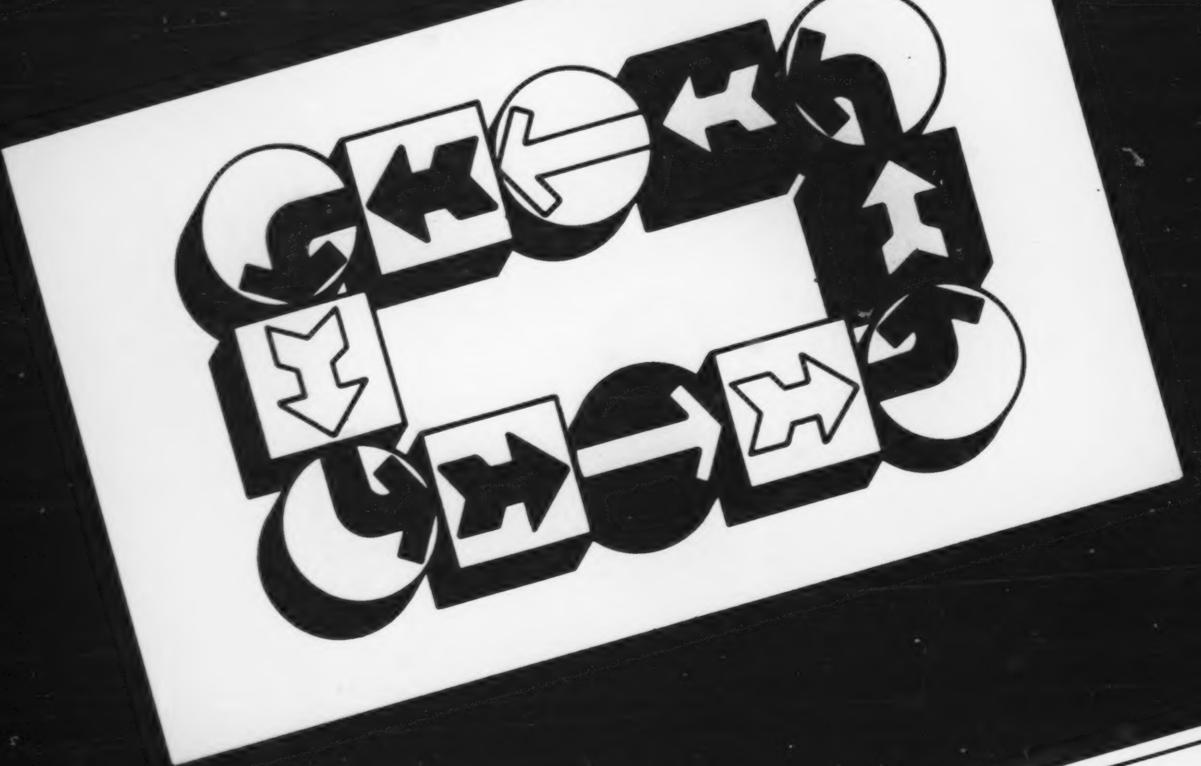

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FOREWORD

After an intensive program of research and development by the National Center for Research in Vocational Education[*] at The Ohio State University, a set of performance-based teacher education (PBTE) materials was developed, and a guide was prepared to help those serving as resource persons in teacher education programs designed around the use of these materials. Since the first edition of this guide was published in 1978, many such programs have been implemented, and a new acronym was born: when the PBTE materials were used by local secondary and two-year postsecondary schools for staff development purposes, the programs were called competency-based staff development, or CBSD, programs.

This second edition of the *Resource Person's Guide* includes material from the original guide that passed the test of time, as well as new material drawn from the experiences of those who have actually served as resource persons for PBTE or CBSD programs. The guide also has been updated to include information about the 32 new modules that have been added to the series since the first edition of the guide was produced.

Among those people who may find the materials in this document helpful are those responsible for implementing PBTE/CBSD programs and those serving as resource persons in such programs, whether their employer is a state department, four-year university/college, two-year postsecondary institution, secondary school, or business/industry training department. Though prepared specifically for those installing the Center's PBTE/CBSD curricular materials, it is intended that this guide may also prove useful in a wider sense to all who are interested in exploring the potential of performance/competency-based education at any level and in any subject matter field.

Acknowledgement is due to James B. Hamilton, former director of the Center's PBTE/CBSD module development activities, for taking major responsibility for preparing the second edition of this guide. Recognition is also given to Lois G. Harrington, program associate, for the refinement and editing of the manuscript.

Special recognition is also extended to the staff at AAVIM for their invaluable contributions to the quality of the final printed product, particularly to Jason Edwards for module layout, design, and final art work; to Suzanne Bowman for typesetting; and to George W. Smith, Jr., for supervision of the module production process.

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[*] Now the Center on Education and Training for Employment.

CENTER ON EDUCATION AND TRAINING FOR EMPLOYMENT
THE OHIO STATE UNIVERSITY
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- impact of changing technology in the workplace and on the delivery of education and training
- quality and outcomes of education and training for employment
- quality and nature of partnerships with education, business, industry, and labor
- opportunity for disadvantaged and special populations to succeed in education, training, and work environments
- short- and long-range planning for education and training agencies
- approaches to enhancing economic development and job creation

AMERICAN ASSOCIATION FOR VOCATIONAL INSTRUCTIONAL MATERIALS
The National Institute for Instructional Materials
120 Driftmier Engineering Center
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The American Association for Vocational Instructional Materials (AAVIM) is a non-profit national institute located on the campus of The University of Georgia.

The institute is a cooperative effort of universities, colleges, and divisions of vocational and technical eduction in the United States, established to provide excellence in instructional materials.

Direction is given by a representative from each of the states. AAVIM also works closely with teacher organizations, government agencies and industry.

Resource Person's Guide . . .
to Using Performance-Based Teacher Education Materials

Second Edition

PROFESSIONAL TEACHER EDUCATION MODULE SERIES

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The Ohio State University

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INTRODUCTION

The purpose of this guide is to assist you in using the Professional Teacher Education Module Series developed by the Center on Education and Training for Employment (formerly the National Center for Research in Vocational Education) at The Ohio State University. The design of these performance-based teacher education (PBTE) or competency-based staff development (CBSD) materials requires that knowledgeable, competent, professional educators fulfill the role of **resource person**—the individual using these materials to develop or improve the teaching competence of pre- and inservice teachers (instructors, trainers).

Vaguely knowledgeable people cannot fulfill the role effectively. As teachers use these modularized materials, the role of the resource person is to provide guidance, to assist, and to evaluate performance. These different functions may be carried out by separate individuals or by one individual, depending upon the particular setting in which the curricular materials are being used.

A resource person might be a teacher educator on a college campus, a supervising or master teacher in a local school, a director or coordinator of staff development in a secondary or two-year postsecondary institution, a state or local instructional supervisor, a school or college administrator, a training director in business or industry, or any other professional educator who assists others in developing teaching competence.

Some basic assumptions have been made in the development of this guide. The first of these assumptions is that you have already made a decision to conduct a performance-based teacher education (PBTE) or competency-based staff development (CBSD) program. It is also assumed that a decision has been made to use the Center's PBTE/CBSD materials—or that, at least, serious consideration is being given to adopting their use in conducting the PBTE/CBSD program.

We assume further that some planning has been done toward implementation of the program and, of considerable importance, that you will be fulfilling the role of a resource person to individuals using these curricular materials. This guide has been developed to assist you in performing the functions of the resource person in an effective and efficient manner.

The Center's materials consist primarily of over 130 performance/competency-based modules. A set of supporting print and audiovisual materials is also available to assist in the implementation and use of these modules.

In a PBTE/CBSD program, the resource person has a unique and essential role to perform, serving as advisor, facilitator, and assessor. Field-testing and training experience with many educational institutions and other agencies repeatedly reinforced the need for the adequate training of resource persons. Hence, both the developer and publisher **strongly recommend** that institutions planning to use the Center's materials arrange for the provision of adequate training to ensure the most effective use of the materials. This guide is one tool for assisting those preparing for and serving as resource persons.

This guide includes three chapters and appended resource materials. The first chapter provides a basic introduction to PBTE and CBSD and to the Center's materials. Characteristics of PBTE/CBSD are presented and discussed, and characteristics and components of the modularized materials are presented. The second chapter deals specifically with the resource person's responsibilities relative to planning each teacher's program, guiding learning activities, and assessing teacher performance. The third chapter is devoted to managing the role of the resource person.

Appended materials are provided as resources for your use in working with pre- and inservice teachers who are using the PBTE/CBSD materials. An overview of the teacher competency research base and the curriculum development process is also appended to add to your knowledge about the materials.

Chapter I

TEACHER EDUCATION, STAFF DEVELOPMENT, AND THE CENTER'S PBTE/CBSD MATERIALS

This section presents information about performance-based teacher education (PBTE), competency-based staff development (CBSD), and the Center's PBTE/CBSD materials. You should find this information useful in furthering your own knowledge and understanding of these concepts and materials, as well as in communicating this information to those with whom you will be working in your PBTE/CBSD program.

PBTE Defined

PBTE is an approach to teacher education in which the teacher is required to demonstrate essential teaching tasks in an actual teaching situation. Actual performance of the tasks ensures that the teacher has not only the **knowledge** required, but also the **ability to perform** the competencies (skills or tasks) that are essential to successful teaching.

Traditionally, teacher education courses have tended to place emphasis on the theory of teaching. In PBTE programs, the focus is on mastery of the specific teaching skills needed and the ability to apply those skills in an effective, orchestrated way—the art and science of teaching.

In response to state certification standards, teacher education programs have often focused on giving teachers the necessary number of courses, with the proper course titles, in order to meet graduation and certification requirements. In PBTE programs, the focus is on enabling teachers to demonstrate the knowledge, skills, and attitudes essential to successful teaching by structuring the program around teacher competencies that have been (1) identified through research as important and (2) analyzed to determine the instructional elements involved in their mastery.

CBSD Defined

Like PBTE, a competency-based staff development program is structured on the basis of identified and verified teacher competencies and requires actual performance as proof of competence. The difference between the two approaches is that public and private educational institutions, businesses and industries, governmental agencies, and others use CBSD programs with **individuals already on the job** to prepare them for their instructional role. CBSD provides instructors with a systematic program for improving their present teaching skills and acquiring new ones.

This approach to staff development has particular significance for occupational instructors in two-year postsecondary institutions and trainers in business and industry, who may be drawn into teaching on the basis of their occupational expertise and who now need to acquire a core of teaching skills. A CBSD program also offers those instructors who have had formal preparation as teachers a unique opportunity for professional growth.

Characteristics of PBTE and CBSD Programs

The terms *competency-based* and *performance-based* are defined as being separate concepts by some educators. For them, the word *competency* emphasizes the fact that learning in competency-based programs is structured around the **identified and verified competencies** needed by teachers. The word *performance*, on the other hand, emphasizes the fact that performance-based programs require teachers to **demonstrate their ability to perform** the essential competencies in an actual classroom or laboratory setting.

The Center's modules are structured upon identified and verified teacher competencies that the learner is required to perform in an actual teaching situation. The curricular materials are, therefore, both competency- and performance-based. Furthermore, regardless of the terminology preferred by individual practitioners, the preparation of the individual to perform effectively in the teaching role remains of utmost importance. Thus, the following characteristics are considered by Center staff to be **essential** for any PBTE or CBSD program:

- The competencies to be achieved by the teacher are rigorously identified, verified, and made public in advance of instruction. This establishes what is taught in the PBTE/CBSD program.
- The criteria to be used in assessing achievement and the conditions under which achievement will be assessed are explicitly stated and made public in advance. This establishes what

procedures and criteria will be used to evaluate what the teachers in the PBTE/CBSD program have learned.

- The instructional program provides for the individual development and evaluation of each of the specified competencies. This establishes how instruction will occur in the PBTE/CBSD program.
- The assessment of the teacher's competence uses his/her performance in the teaching role as the primary source of evidence but takes the teacher's knowledge and attitudes into account as well. This establishes what learning is to be tested in the PBTE/CBSD program, and how it is to be tested.
- The instructor's rate of progress through the program occurs at his/her own best rate and is determined by demonstrated competence rather than by time or course completion. This establishes how teachers will advance through the PBTE/CBSD program.[1]

In addition to the above elements, there are some **facilitating** characteristics that contribute to the achievement of the PBTE and CBSD essentials:

- Instruction is individualized and personalized.
- The learning experience is guided by continual and detailed feedback.
- The program as a whole is systemic.
- Emphasis is on exit, not entrance, requirements.
- The instructional materials used (e.g., learning guides or modules) are keyed to the competencies to be achieved.
- The instructor is held accountable for performance.[2]

PBTE/CBSD and Conventional Approaches Contrasted

From the characteristics of PBTE and CBSD programs, it is evident that a great deal of emphasis is placed upon the identification, attainment, and assessment of teaching competencies. It may be helpful in describing the PBTE/CBSD approach to contrast several features of this approach with features characterizing a conventional approach.

In sample 1, characteristics of seven aspects of a conventional approach are contrasted with the characteristics of a PBTE/CBSD approach. These contrasts are presented as **general** contrasts between the two types of approaches. It should be noted, however, that any existing "conventional" teacher education program may include program features characterizing a PBTE approach as described in sample 1.

You may find the further comparisons between conventional and PBTE/CBSD approaches shown in sample 2 to be useful in explaining and clarifying these differences to teachers in your PBTE or CBSD program.

---

[1] Adapted from American Association of Colleges of Teacher Education, *Achieving the Potential of PBTE: Recommendations*, PBTE Series: No. 16 (Washington, DC: AACTE, 1974), pp. 32–33.

[2] Adapted from AACTE, *Achieving the Potential of PBTE: Recommendations*, pp. 32–33.

SAMPLE 1

FEATURES OF CONVENTIONAL AND PBTE/CBSD APPROACHES

	Conventional	PBTE/CBSD
Objectives	General	Specific and Behavioral
Content	Textbook(s), Lectures	Modules, Multimedia
Nature of Instruction	Group Oriented—Lectures, Recitations	Individual Oriented—Self-Paced Study, Tutoring
Evaluation	Tests, Quizzes, and Written Exams; Norm-Referenced	Performance in Teaching Situations; Criterion-Referenced
Feedback	Periodic	Frequent
Emphasis	Achieving Grades—Knowing	Achieving Competence—Doing
Completion	Time-Based	Performance-Based

SAMPLE 2

LET'S COMPARE APPROACHES

Conventional	**PBTE/CBSD**
1. Content-Based	1. Competency-Based
2. Time-Based	2. Performance-Based
3. Group Paced	3. Individually Paced
4. Group Needs	4. Individual Needs
5. Delayed Feedback	5. Immediate Feedback
6. Textbook/Workbook	6. Multimedia Materials
7. Course-Oriented	7. Module-Oriented
8. Classroom-Based	8. Field-Based
9. Instructors	9. Resource Persons
10. General Objectives	10. Specific Objectives
11. Subjective Criteria	11. Objective Criteria
12. Norm-Referenced	12. Criterion-Referenced

The Center's PBTE/CBSD Materials

The Center has developed a performance/competency-based curriculum especially designed for use in implementing preservice and/or inservice PBTE and CBSD programs for vocational-technical teachers. These curricular materials consist of over 130 modules and a set of print and audiovisual supporting materials.

The development of the materials involved four major phases: (1) identification of important teaching competencies (research base), (2) development and testing of curricular materials, (3) dissemination and implementation activities, and (4) additional research and development, plus revision of the original 100 modules. The four phases are more fully described in appendix A.

Characteristics and Advantages of the Materials

There are five unique characteristics and advantages inherent in the design of the Center's instructional materials.

First, learning materials in the system are developed and organized in the form of individualized packages, or **modules,** each of which has as its base one or more competencies identified and verified through research. By basing the modules on the verified competencies, there is solid assurance that the modules represent the actual competencies needed by vocational-technical teachers.

Second, the program is designed to maximize **individualized instruction.** All the modules have been developed to allow each program to be tailored to meet teachers' individual needs and interests. Pre- and inservice teachers, with the help of their resource persons, can decide on the total number of modules they need to take, and on the sequence and pace in which they can best develop the required competencies.

Third, the instructional system has been designed to provide teachers with **immediate feedback** after each learning experience. Explicit criterion-referenced evaluation devices are used to assess each teacher's progress and final performance. This method provides teachers with timely guidance to assist in their learning.

Fourth, one of the most important characteristics of the modules is that teachers are always required to demonstrate in an actual teaching situation that they have achieved the expected competency. The final experience in each module requires this **actual teaching performance.** Opportunity to practice the competency in simulated situations is provided prior to final performance to ensure that teachers have sufficient preparation to gradually gain competence in their new professional role in the field.

Fifth, almost all the modules include all the **essential information** a teacher needs to achieve the specified competency. This provides great flexibility, allowing the modules to be used with a group or on an individual basis.

Occasionally, outside references are required when it is felt that (1) the reference is so exceptional or important that teachers in the field should be familiar with the original reference and/or (2) the information can best be obtained through reading the original document (e.g., reading the state plan for vocational education or the handbook for the vocational student organization in a specific service area). Sometimes, additional outside references are suggested as optional readings to supplement and enrich the learner's experiences.

The Curricular System Defined

Many important elements undergird the Center's curricular system. Four of them are essential to successful implementation of a PBTE/CBSD program: modules and related materials, trained resource persons, access to resources, and teaching setting.

Modules and related materials. Basically, a module is a unit of learning. It includes a set of activities intended to assist in the teacher's achievement of a teaching competency specified in the form of a **terminal objective.** Some modules focus on finite teaching competencies that can be achieved in a short time, whereas others are broad in scope and require longer periods of time for completion. Although the scope, size, and content of the modules vary depending upon the terminal objective and setting, module format is standardized.

There are at present 132 modules in the PBTE series. They have been grouped into 14 categories and color-coded for easy reference as follows:

Category	Title	Color Code	No. of Modules
A	Program Planning, Development, and Evaluation	Red	11
B	Instructional Planning	Yellow	6
C	Instructional Execution	Turquoise	29
D	Instructional Evaluation	Lime	6
E	Instructional Management	Orange	10
F	Guidance	Gold	5
G	School-Community Relations	Rust	10
H	Vocational Student Organization	Ochre	6
I	Professional Role and Development	Gray	8

J	Coordination of Cooperative Education	Green	10
K	Implementing Competency-Based Education (CBE)	Mauve	6
L	Serving Students with Special/Exceptional Needs	Olive	13
M	Assisting Students in Improving Their Basic Skills	Brown	6
N	Teaching Adults	Copper	6
		Total	132

In addition to the 132 modules, other related materials have been developed to ensure effective implementation of the curricular system. These include a teacher competency profile, an implementation guide, this resource person's guide, a source guide for securing the outside resources suggested in each module, a student guide, a slide/tape presentation on PBTE and the modularized materials, a slide/tape presentation on the role of the resource person, a slide/tape for orienting pre- and inservice teachers to PBTE, and a 1978 state-of-the-art report on PBTE.

All the modules and related materials have been carefully developed, and the modules have been rigorously reviewed and/or tested in the field. The modules are well-designed units of learning, covering verified teaching competencies and containing reliable information and strategies for developing the competence of vocational-technical teachers.

Resource persons. By themselves, the modules cannot produce or train competent teachers; they must be incorporated into a total performance- or competency-based program and implemented effectively so that the pre- and inservice teachers using them can achieve the expected competencies. Guiding the teacher's effective use of the modules in such a program is the function of the resource person.

A resource person is the professor, instructor, cooperating teacher, administrator, supervisor, director of professional development, instructor trainer, or other individual responsible for helping each teacher plan for and progress through his/her educational program. With the Center's curricular system, a teacher may work with one resource person for all modules, with a team of resource persons for each module, or with different resource persons for different modules.

The success of any PBTE or CBSD program depends to a great extent on the effectiveness of the resource person in (1) **guiding** the selection of and the teacher's progress through appropriate learning experiences and activities; (2) **arranging** for the teacher to demonstrate competence in an actual teaching setting; and (3) **assessing** the teacher's performance in the actual teaching situation. It is essential that each resource person be trained to carry out these functions effectively.

Access to resources. Resources are an integral part of the PBTE/CBSD curricular system. The modules are, for the most part, self-contained; that is, the information and devices needed to complete a module are contained within the module. Other resources that may be needed might include materials for applying the skill to the local setting; additional references for more in-depth study of the topic or to accommodate varying learning styles; videotape equipment; and facilities for planning, taping, role-playing, and conferring with resource persons and other learners.

One effective means of providing teachers in a single location with the needed resources is to set up a resource center. However, in some situations (e.g., outreach programs) the resource person must use other means to make the resources readily available to each teacher at the times and locations needed. Whatever means are used to provide resources to the teachers in the program, provision must be made for maintaining sufficient numbers of materials and equipment for the effective operation of the program. Resource persons, as well as teachers, must be familiar with the operational procedures prescribed for gaining access to and using the resources effectively.

School setting. Assessment in the PBTE/CBSD curricular system is field-based. The final learning experience of each module requires the teacher to demonstrate his/her competence in an actual teaching role; that is, to perform the skill in an actual secondary, postsecondary, or business/industry training setting when he/she is serving as an intern, student teacher, inservice teacher, instructor, or trainer.

General Learning Procedure

The pre- or inservice teacher entering a PBTE or CBSD program is provided with a list of prescribed competencies he/she needs to develop (or identifies these competencies with the help of the resource person). The modules covering those competencies are then selected. The teacher can complete these modules one at a time or can work on two or more modules simultaneously. Guided by the resource person, the teacher determines which learning experiences in a module he/she needs to complete (i.e., those in which the teacher is not already competent).

Each module provides the teacher with background information regarding the competency, as well as an opportunity to practice the competency in a simulated situation. When the teacher feels that he/she has adequate background and practice in the competency, arrangements are made for assessment by the resource person in an actual teaching situation.

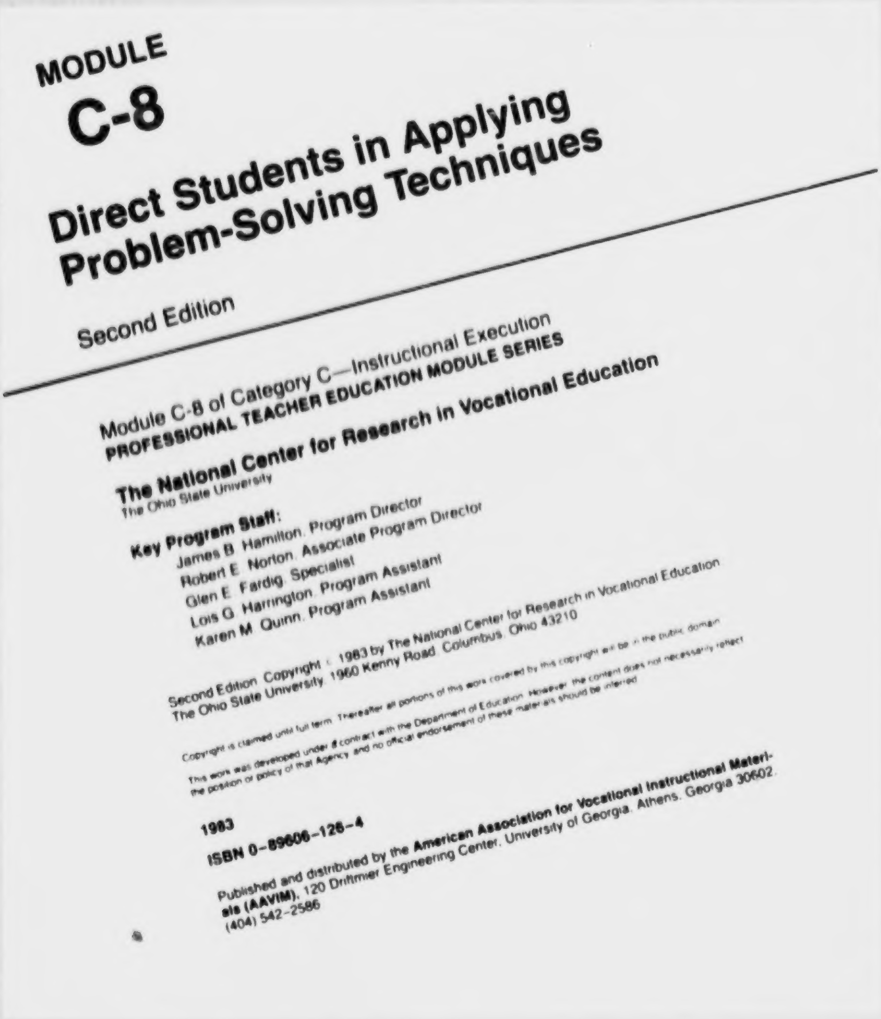
Module Components

Module format is standardized into a title page and four major components: (1) introduction, (2) *About This Module,* (3) *About Using the PBTE Module Series,* and (4) learning experiences. These components—their nature, their intended purposes, and the approaches used in each—are discussed in the order of their appearance or reference in a module.

Title page. The title page lists the module title and the module category and number (see sample 3). The module title spells out in performance terms (through the use of an **action verb**) the competency to be achieved, such as *Direct Students in Applying Problem-Solving Techniques.* Under the title and edition, you will find the module category and number. They help you, the resource person, locate the module in the series master list, identify its relationship with other modules, and organize the modules for storage and use.

SAMPLE 3

TITLE PAGE



MODULE
C-8
Direct Students in Applying
Problem-Solving Techniques

Second Edition

Module C-8 of Category C—Instructional Execution
PROFESSIONAL TEACHER EDUCATION MODULE SERIES

The National Center for Research in Vocational Education
The Ohio State University

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Karen M Quinn, Program Assistant

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Introduction. The introduction explains what competency is covered in the module and the importance of this competency for effective teaching. It is designed to motivate the teacher to want to acquire the skill and to establish a frame of reference for the module. If necessary, terms related to the competency to be covered are defined. Sample 4 shows the introduction from Module C-8.

SAMPLE 4

INTRODUCTION

INTRODUCTION

If there were no problems to solve, life in modern society would be a lot easier—but infinitely less interesting and challenging. Your vocational-technical students will find, however, that there are plenty of problems that they must deal with: personal problems in coping with daily living, societal problems that affect us all in one way or another, and of course, the problems that are a part, to a greater or lesser extent, of every occupation.

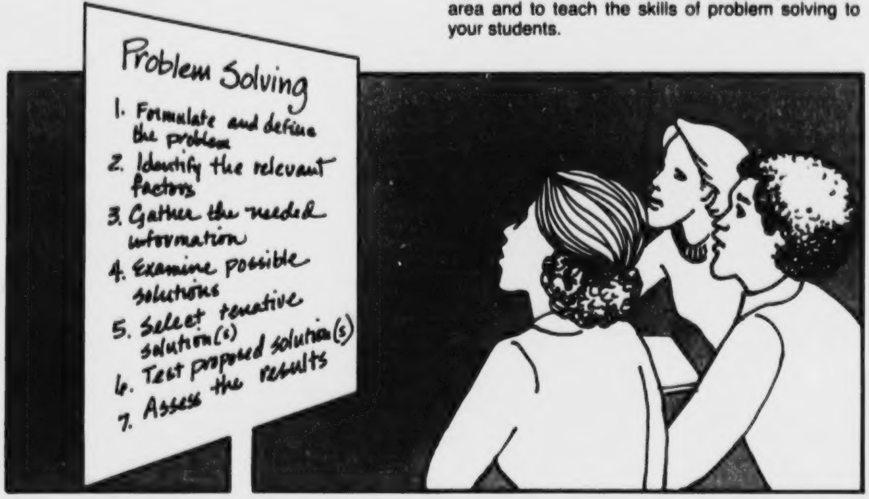
Occupational instructors are concerned with helping students develop the knowledge, skills, and attitudes they need to live well and work effectively in this society. One of the most important skills for students to learn is the ability to solve problems on their own—to be able to apply problem-solving techniques to the great variety of situations they will face in their personal, as well as working, lives.

Problem solving is not a simple or natural process; it is not built into our genes, and it is not just a matter of using "common sense." Efficient problem-solving techniques can be learned and, therefore, should be taught. If you simply give your students the right answer to every question or supply them with a facile solution to every problem, you will not be providing them with the opportunity to learn and to practice problem-solving skills. Faced with a new problem or decision, they will not know how to approach it or how to come to a rational conclusion.

Problem solving is an integral and essential part of all but the most basic occupations. In the technical fields, the ability to systematically define, attack, and derive solutions to problems is vital to occupational success. The computer programmer must be skilled in "debugging" a new program. The agriculturist annually faces the problems of selecting crops, planning for disease control, and deciding on marketing strategies. The nurse must be able to deal with patients and families experiencing deep personal difficulties. None of these are easy tasks with ready-made solutions.

The underlying assumption of this module is that developing a student's ability to think critically and act responsibly is a fundamental responsibility of teachers at all levels. Students need to be taught to identify a problem, gather relevant information, evaluate the data, assess the alternatives, and derive a course of action. At the same time, you will be using problem solving as an instructional method. It is a method that can add realism and relevance to the subject matter, create interest and motivation, challenge students to apply all their knowledge and use all their faculties, and serve as a capstone experience in putting together a variety of other skills.

The learning experiences in this module are designed to give you the background knowledge and experience you need in order to use problem solving as an instructional method in your subject matter area and to teach the skills of problem solving to your students.


Problem Solving
1. Formulate and define the problem
2. Identify the relevant factors
3. Gather the needed information
4. Examine possible solutions
5. Select tentative solution(s)
6. Test proposed solution(s)
7. Assess the results

About This Module. This component of the module familiarizes the teacher with the module objectives, prerequisites for the module (if any), resources needed for the module, and general information (see sample 5).

The **objectives** section lists the terminal objective (the competency the instructor will be expected to perform in an actual teaching situation) and the enabling objectives provided to lead the teacher to achievement of the terminal objective.

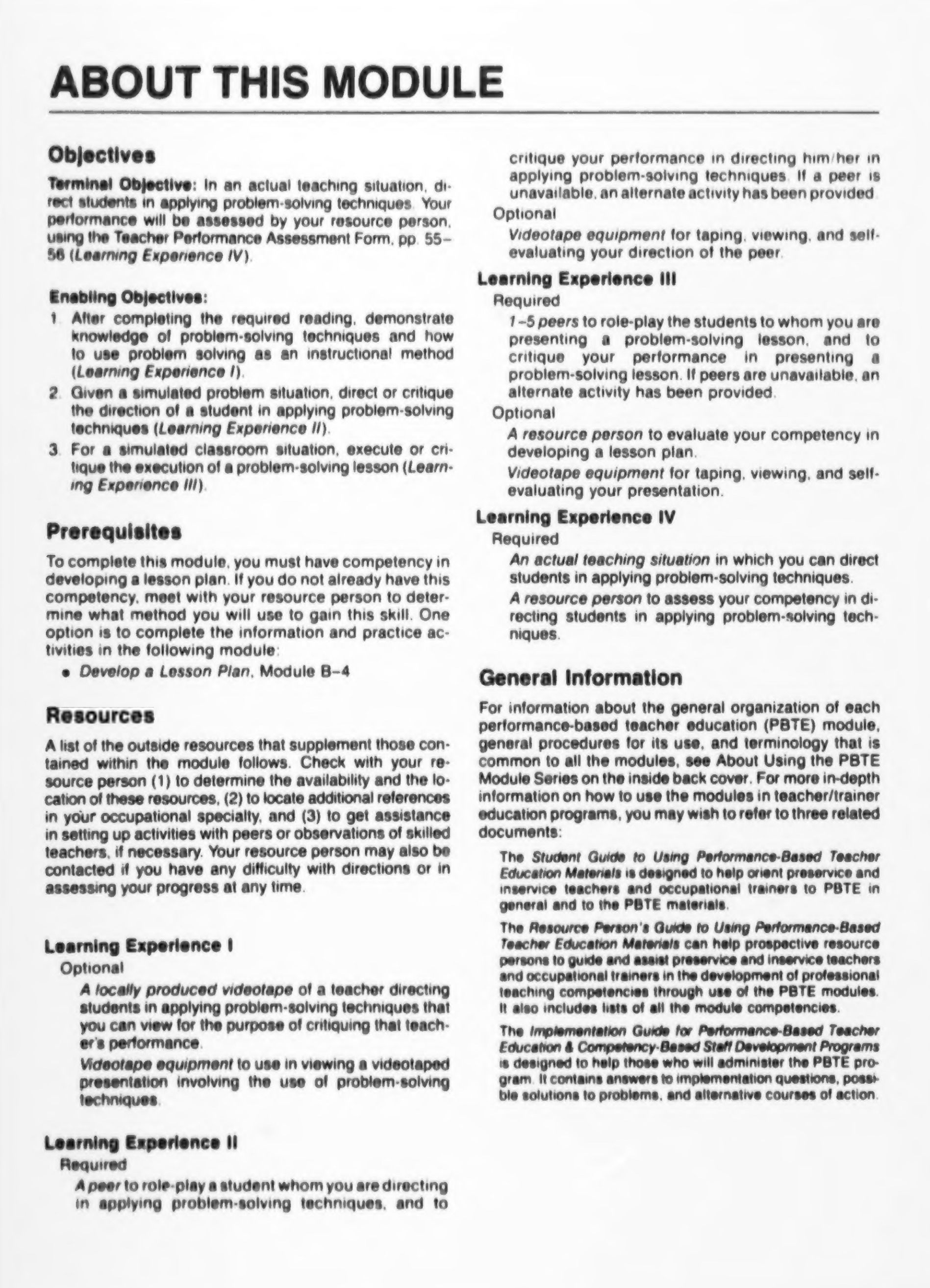
If there are competencies the teacher should possess in order to successfully pursue the module, these are listed in a **prerequisites** section. These competencies are listed in terms of module titles. However, the explanatory information advises the teacher that the prerequisite competencies may instead be acquired through other means agreed upon by you and the teacher. It should also be noted that, although meeting the listed prerequisites is considered highly desirable for the successful completion of a module, there are times when expediency demands that the module be pursued without full completion of the prerequisites. Experience has shown that this is often done successfully.

The **resources** section lists, by learning experience, the required and optional outside resources needed in order to complete the module, with a brief explanation of how they will be used. This enables you to make arrangements to secure the necessary resources prior to the time when a teacher starts the module. A complete list of resources needed for all modules, with directions for obtaining these resources, is supplied in one of the supporting documents: *Supplementary Resources Suggested for the PBTE/CBSD Modules.*

The **general information** section directs the module user to the inside back cover of the module for information about the general organization of each module, general procedures for its use, and terminology that is common to all the modules. For more in-depth information on how to use the modules in teacher training programs, the module user is referred to three related documents: the *Student Guide,* the *Resource Person's Guide,* and the *Implementation Guide.*

SAMPLE 5

ABOUT THIS MODULE



ABOUT THIS MODULE

Objectives

Terminal Objective: In an actual teaching situation, direct students in applying problem-solving techniques. Your performance will be assessed by your resource person, using the Teacher Performance Assessment Form, pp. 55–56 (*Learning Experience IV*).

Enabling Objectives:

1. After completing the required reading, demonstrate knowledge of problem-solving techniques and how to use problem solving as an instructional method (*Learning Experience I*).
2. Given a simulated problem situation, direct or critique the direction of a student in applying problem-solving techniques (*Learning Experience II*).
3. For a simulated classroom situation, execute or critique the execution of a problem-solving lesson (*Learning Experience III*).

Prerequisites

To complete this module, you must have competency in developing a lesson plan. If you do not already have this competency, meet with your resource person to determine what method you will use to gain this skill. One option is to complete the information and practice activities in the following module:

- *Develop a Lesson Plan*, Module B–4

Resources

A list of the outside resources that supplement those contained within the module follows. Check with your resource person (1) to determine the availability and the location of these resources, (2) to locate additional references in your occupational specialty, and (3) to get assistance in setting up activities with peers or observations of skilled teachers, if necessary. Your resource person may also be contacted if you have any difficulty with directions or in assessing your progress at any time.

Learning Experience I

Optional

A locally produced videotape of a teacher directing students in applying problem-solving techniques that you can view for the purpose of critiquing that teacher's performance.

Videotape equipment to use in viewing a videotaped presentation involving the use of problem-solving techniques.

Learning Experience II

Required

A peer to role-play a student whom you are directing in applying problem-solving techniques, and to critique your performance in directing him/her in applying problem-solving techniques. If a peer is unavailable, an alternate activity has been provided.

Optional

Videotape equipment for taping, viewing, and self-evaluating your direction of the peer.

Learning Experience III

Required

1–5 peers to role-play the students to whom you are presenting a problem-solving lesson, and to critique your performance in presenting a problem-solving lesson. If peers are unavailable, an alternate activity has been provided.

Optional

A resource person to evaluate your competency in developing a lesson plan.

Videotape equipment for taping, viewing, and self-evaluating your presentation.

Learning Experience IV

Required

An actual teaching situation in which you can direct students in applying problem-solving techniques.

A resource person to assess your competency in directing students in applying problem-solving techniques.

General Information

For information about the general organization of each performance-based teacher education (PBTE) module, general procedures for its use, and terminology that is common to all the modules, see About Using the PBTE Module Series on the inside back cover. For more in-depth information on how to use the modules in teacher/trainer education programs, you may wish to refer to three related documents:

The ***Student Guide to Using Performance-Based Teacher Education Materials*** is designed to help orient preservice and inservice teachers and occupational trainers to PBTE in general and to the PBTE materials.

The ***Resource Person's Guide to Using Performance-Based Teacher Education Materials*** can help prospective resource persons to guide and assist preservice and inservice teachers and occupational trainers in the development of professional teaching competencies through use of the PBTE modules. It also includes lists of all the module competencies.

The ***Implementation Guide for Performance-Based Teacher Education & Competency-Based Staff Development Programs*** is designed to help those who will administer the PBTE program. It contains answers to implementation questions, possible solutions to problems, and alternative courses of action.

About Using the PBTE Module Series. Located on the inside back cover of each module, this component provides general information applicable to each of the 132 modules: module organization, procedures for using modules, module terminology, and explanations of the levels of performance for final assessment (see sample 6).

The **organization** section explains in very general terms how a module is structured and the types of learning experiences found in a module.

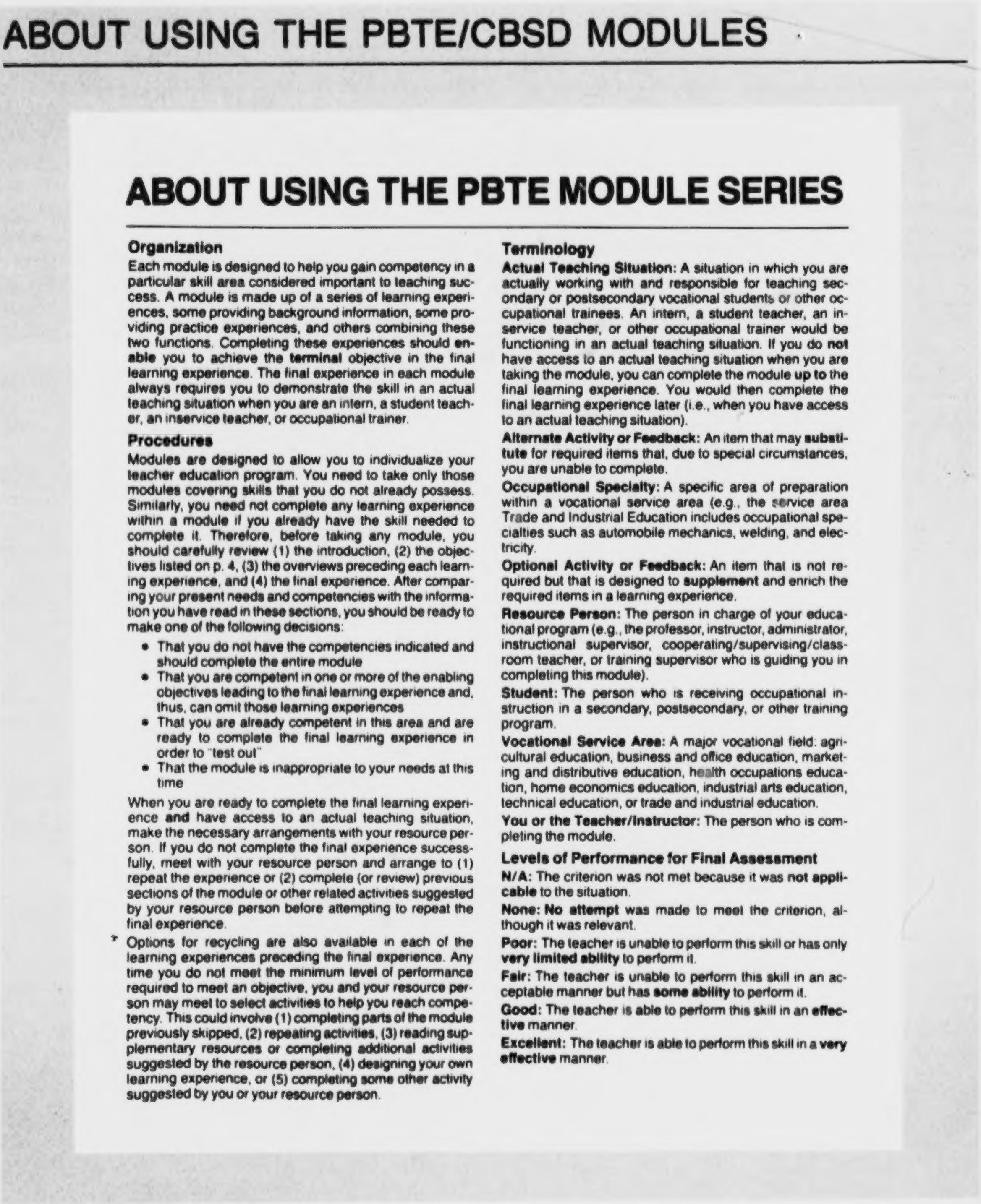
The **procedures** section tells what options the teacher has for completing a module—how to decide which learning experiences need to be completed, which can be skipped, and whether to attempt to meet the terminal objective immediately.

The **terminology** section defines the standard terms used in all modules. (Terms specific to a particular module are defined in the introduction or in an information sheet within a learning experience.)

The **levels of performance for final assessment** section further explains and defines the terms used to rate the teacher's level of performance on each criterion in the Teacher Performance Assessment Form provided in the final experience of each module.

SAMPLE 6

ABOUT USING THE PBTE/CBSD MODULES



ABOUT USING THE PBTE MODULE SERIES

Organization

Each module is designed to help you gain competency in a particular skill area considered important to teaching success. A module is made up of a series of learning experiences, some providing background information, some providing practice experiences, and others combining these two functions. Completing these experiences should **enable** you to achieve the **terminal** objective in the final learning experience. The final experience in each module always requires you to demonstrate the skill in an actual teaching situation when you are an intern, a student teacher, an inservice teacher, or occupational trainer.

Procedures

Modules are designed to allow you to individualize your teacher education program. You need to take only those modules covering skills that you do not already possess. Similarly, you need not complete any learning experience within a module if you already have the skill needed to complete it. Therefore, before taking any module, you should carefully review (1) the introduction, (2) the objectives listed on p. 4, (3) the overviews preceding each learning experience, and (4) the final experience. After comparing your present needs and competencies with the information you have read in these sections, you should be ready to make one of the following decisions:

- That you do not have the competencies indicated and should complete the entire module
- That you are competent in one or more of the enabling objectives leading to the final learning experience and, thus, can omit those learning experiences
- That you are already competent in this area and are ready to complete the final learning experience in order to "test out"
- That the module is inappropriate to your needs at this time

When you are ready to complete the final learning experience **and** have access to an actual teaching situation, make the necessary arrangements with your resource person. If you do not complete the final experience successfully, meet with your resource person and arrange to (1) repeat the experience or (2) complete (or review) previous sections of the module or other related activities suggested by your resource person before attempting to repeat the final experience.

Options for recycling are also available in each of the learning experiences preceding the final experience. Any time you do not meet the minimum level of performance required to meet an objective, you and your resource person may meet to select activities to help you reach competency. This could involve (1) completing parts of the module previously skipped, (2) repeating activities, (3) reading supplementary resources or completing additional activities suggested by the resource person, (4) designing your own learning experience, or (5) completing some other activity suggested by you or your resource person.

Terminology

Actual Teaching Situation: A situation in which you are actually working with and responsible for teaching secondary or postsecondary vocational students or other occupational trainees. An intern, a student teacher, an inservice teacher, or other occupational trainer would be functioning in an actual teaching situation. If you do **not** have access to an actual teaching situation when you are taking the module, you can complete the module **up to** the final learning experience. You would then complete the final learning experience later (i.e., when you have access to an actual teaching situation).

Alternate Activity or Feedback: An item that may **substitute** for required items that, due to special circumstances, you are unable to complete.

Occupational Specialty: A specific area of preparation within a vocational service area (e.g., the service area Trade and Industrial Education includes occupational specialties such as automobile mechanics, welding, and electricity.

Optional Activity or Feedback: An item that is not required but that is designed to **supplement** and enrich the required items in a learning experience.

Resource Person: The person in charge of your educational program (e.g., the professor, instructor, administrator, instructional supervisor, cooperating/supervising/classroom teacher, or training supervisor who is guiding you in completing this module).

Student: The person who is receiving occupational instruction in a secondary, postsecondary, or other training program.

Vocational Service Area: A major vocational field: agricultural education, business and office education, marketing and distributive education, health occupations education, home economics education, industrial arts education, technical education, or trade and industrial education.

You or the Teacher/Instructor: The person who is completing the module.

Levels of Performance for Final Assessment

N/A: The criterion was not met because it was **not applicable** to the situation.

None: No attempt was made to meet the criterion, although it was relevant.

Poor: The teacher is unable to perform this skill or has only **very limited ability** to perform it.

Fair: The teacher is unable to perform this skill in an acceptable manner but has **some ability** to perform it.

Good: The teacher is able to perform this skill in an **effective** manner.

Excellent: The teacher is able to perform this skill in a **very effective** manner.

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*Formerly called About Using the National Center's PBTE Modules.

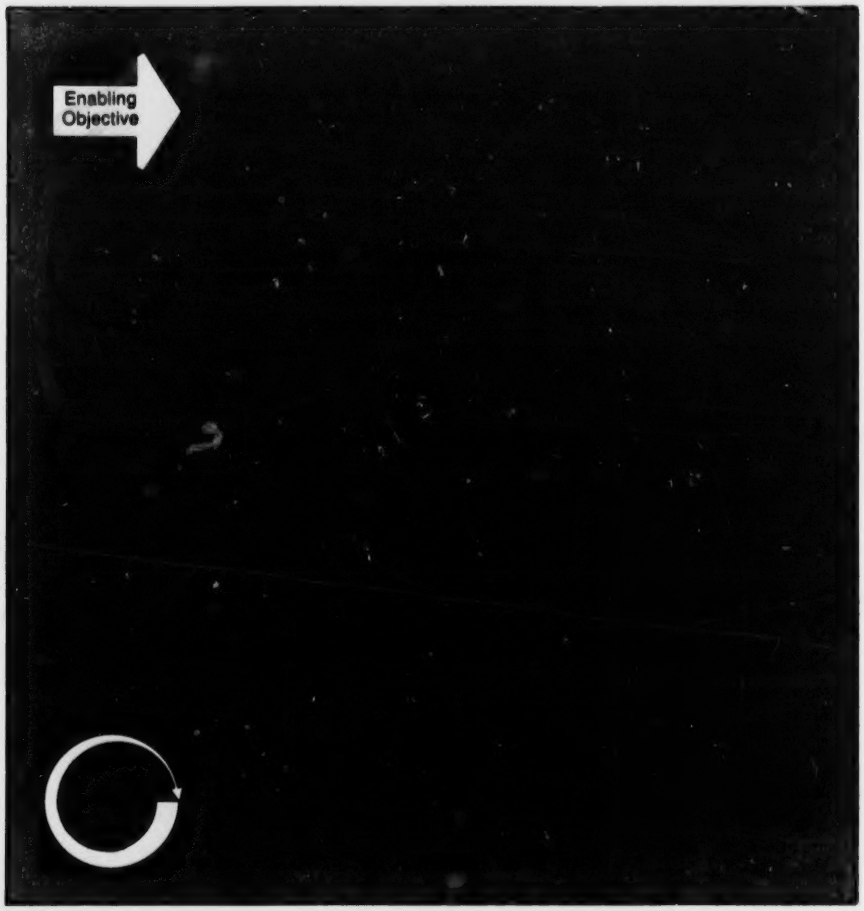
Learning experiences. Each learning experience is preceded by an **overview.** The overview serves as a table of contents for the learning experience, giving the user brief descriptions of the learning activities for that experience. This summary is designed to orient the teacher to the learning experience and help the teacher decide whether he/she needs to complete the total learning experience, portions of it, or none of it. Sample 7 shows an overview from Module C-8.

SAMPLE 7

LEARNING EXPERIENCE OVERVIEW

Learning Experience I

OVERVIEW



Following the overview, the instructor is led step-by-step through the learning experience via the detailed directions provided for each **learning activity** to be performed. Some learning activities provide the teacher with necessary knowledge or background information concerning the competency; for example:

- Reading an information sheet or outside reference
- Observing an experienced teacher
- Viewing a film, filmstrip, or videotape
- Discussing with peers or experts in the skill area

Other learning activities give the teacher the opportunity to practice or apply the competency; for example:

- Role-playing with peers
- Reacting to case studies or case situations
- Critiquing videotaped performances
- Planning in writing
- Operating equipment

In the final learning experience, the instructor puts this knowledge and practice to use by performing the competency in an actual teaching situation.

Information sheets, self-check devices, case studies, planning and critiquing forms, and the like, are included in the module. Resources such as videotapes or optional references need to be secured from a resource center or through you, the resource person. If an activity involves the observation of experienced teachers or role-playing with peers, the teacher will also generally need your assistance in making the necessary arrangements.

For example, in the module *Direct Students in Applying Problem-Solving Techniques,* directions for reading an information sheet (see sample 8) immediately follow the overview for Learning Experience I. The information sheet is included in the module. After the information sheet, an optional activity is suggested: viewing a locally produced videotape (see sample 9). If the teacher chooses to complete this activity, he/she needs to check with the resource person in advance to secure the videotape and arrange to use the facilities and equipment necessary for this activity.

Many learning experiences suggest **optional activities** designed to supplement and enrich instruction. These can include such activities as reading outside references, interviewing experienced teachers, discussing concepts or concerns with peers, observing skilled teachers, and participating in role-plays.

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SAMPLE 8

INFORMATION SHEET EXCERPT

Activity 1

Good problem solving involves following a rather rigorous sequence of rational steps, not simply waiting for a flash of understanding. For information explaining the steps involved in the problem-solving process and describing how to use problem solving as an instructional method, read the following information sheet.

DIRECTING STUDENTS IN APPLYING PROBLEM-SOLVING TECHNIQUES

Many situations in life present problems that need to be solved. A problem exists in any situation in which there is a difficulty or uncertainty that needs some creative or logical solution.

Problems that need solutions can arise in one's home life as well as on the job. For example, how can a family with a limited income use their finances to provide adequately for food, shelter, and clothing and still have funds available for recreational purposes? How can an employee deal with a supervisor who is unknowingly creating friction between the members of his/her staff?

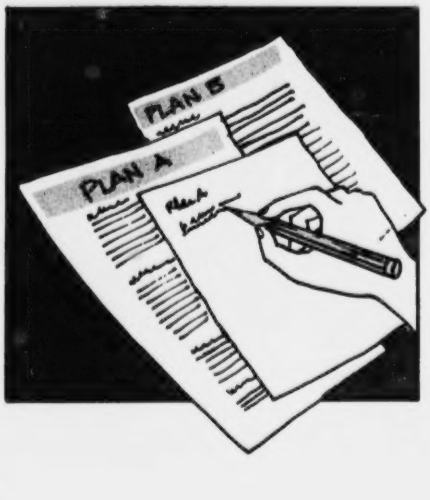
In order to deal with these problems that arise, a rational and organized approach is needed—one that can be applied in developing solutions to these problems.

One valuable technique that is commonly used to deal with a problem is called problem solving. This technique requires the collection, application, and testing of information for the purpose of determining an appropriate solution to an existing problem. The problem-solving approach is a systematic procedure that involves the following basic steps:

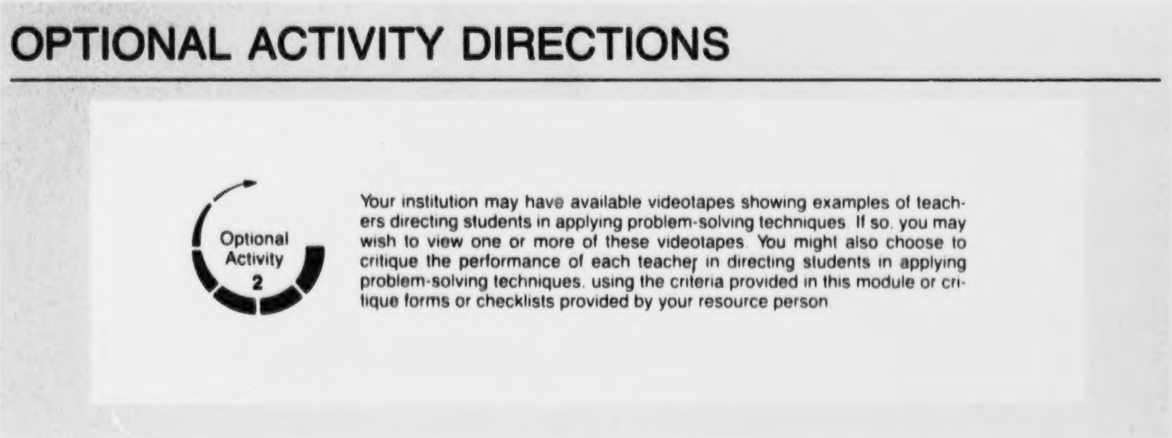
1. Formulating and defining the problem clearly and concisely
2. Identifying the relevant factors
3. Gathering the needed information (facts and knowledge about the problem)
4. Examining possible solutions to the problem
5. Selecting a tentative solution or alternative solutions
6. Testing the proposed solution(s)
7. Assessing the results of the testing

The following example illustrates the problem-solving approach: Mr. O'Leary, a recently employed teacher, has the option of enrolling in a group medical-benefits program. The program has two plans from which he may select. Mr. O'Leary wants to enroll but is unsure about which plan would be most suitable for his situation.

First, he analyzes the situation in terms of his estimated immediate and future medical needs and those of his wife and children. As a result of this analysis, he is able to compile a list of his family's possible medical needs.



SAMPLE 9



OPTIONAL ACTIVITY DIRECTIONS

Optional Activity 2

Your institution may have available videotapes showing examples of teachers directing students in applying problem-solving techniques. If so, you may wish to view one or more of these videotapes. You might also choose to critique the performance of each teacher in directing students in applying problem-solving techniques, using the criteria provided in this module or critique forms or checklists provided by your resource person.

Toward the end of each learning experience, provision is made for the teacher to get **feedback** on how well he/she is doing. It may be in the form of a self-check with model answers; a case study with model critique; or a checklist for the teacher, peers, and/or you to use in rating the teacher's achievement. Model responses and checklists, along with the directions for their use, are always on a separate page to facilitate their use.

Most self-checks are in the form of essay questions (see sample 10), although some modules include self-checks in the form of worksheets to be completed, case studies to be reacted to, or matching questions. Model answers are always provided for the items in the self-check.

The **number of learning experiences** within the modules varies from as few as three to as many as eight. The number of learning experiences within a specific module is dependent upon the nature and complexity of the teaching skill to be developed and the sequence of learning strategies chosen to develop that skill. A typical instructional sequence for the modules is shown in sample 11.

SAMPLE 10

SELF-CHECK EXCERPT

Activity 3

The following items check your comprehension of the material in the information sheet, Directing Students in Applying Problem-Solving Techniques, pp. 6–15. Each of the five items requires a short essay-type response. Please explain fully, but briefly, and make sure you respond to all parts of each item.

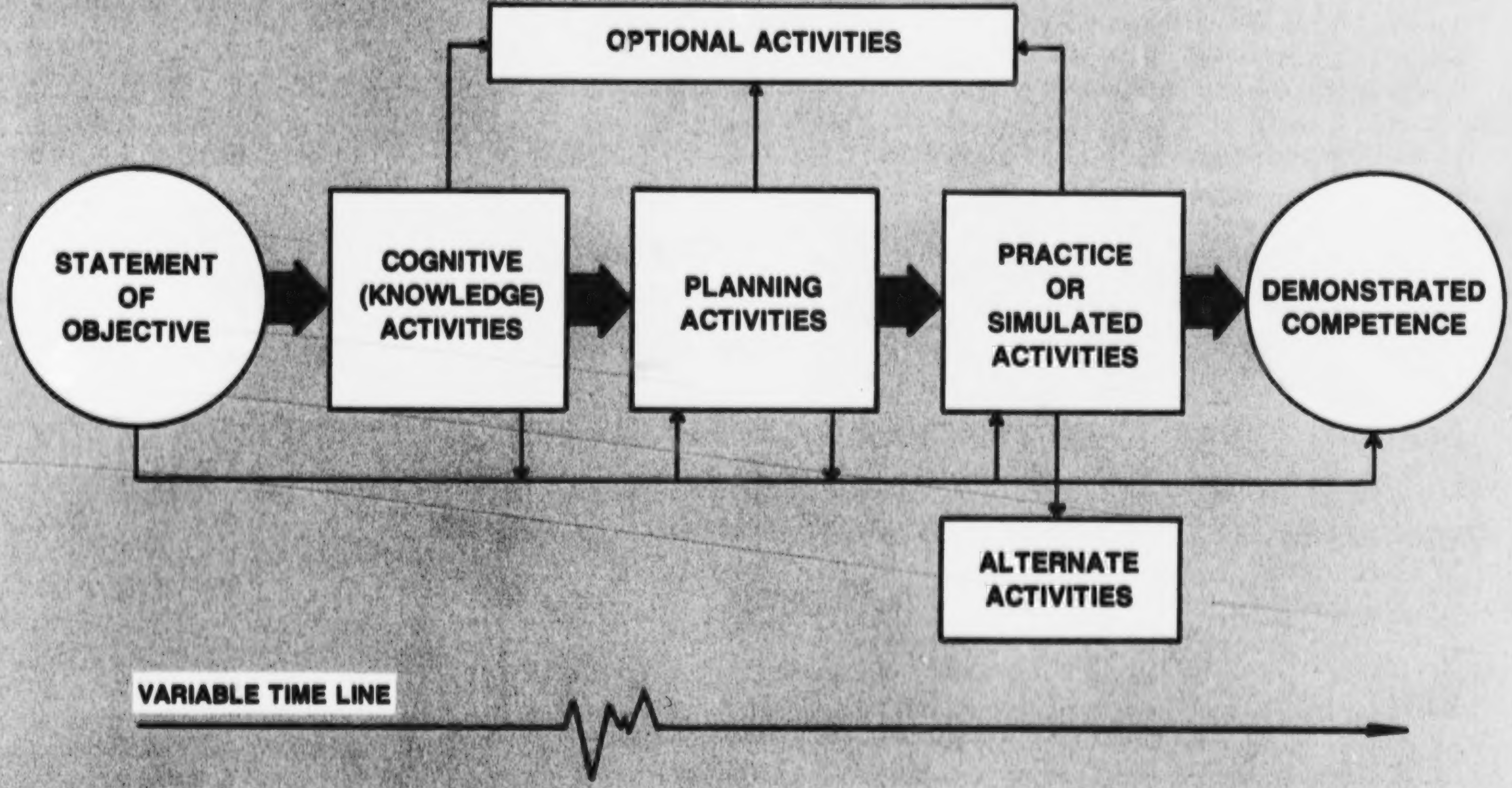
SELF-CHECK

1. Explain why the problem-solving method of teaching is appropriate for teaching skills and knowledge to students.

2. If an instructor is interested in teaching students about human relationships by using the problem-solving method, what technique might he she use, and why?

SAMPLE 11

TYPICAL INSTRUCTIONAL SEQUENCE FOR THE PBTE/CBSD MODULES



OPTIONAL ACTIVITIES

STATEMENT OF OBJECTIVE

COGNITIVE (KNOWLEDGE) ACTIVITIES

PLANNING ACTIVITIES

PRACTICE OR SIMULATED ACTIVITIES

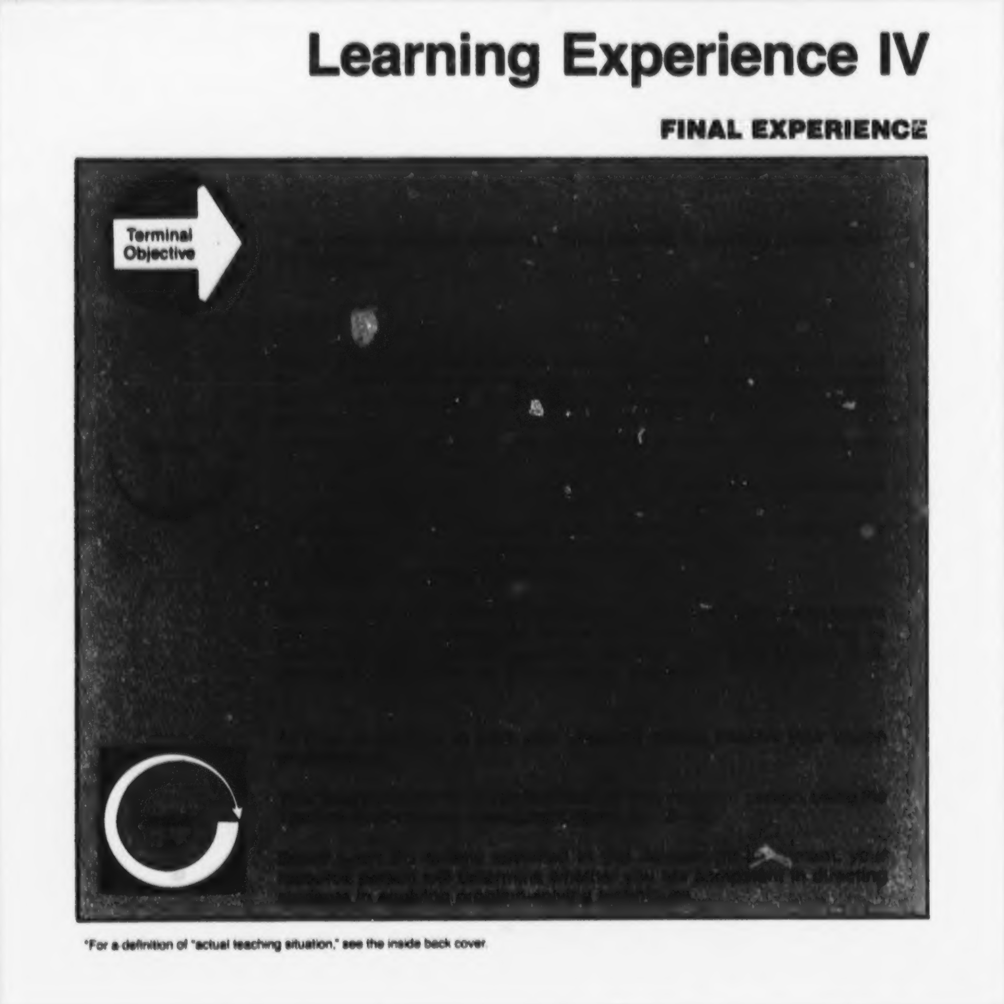
DEMONSTRATED COMPETENCE

ALTERNATE ACTIVITIES

VARIABLE TIME LINE

SAMPLE 12

FINAL LEARNING EXPERIENCE DIRECTIONS



Learning Experience IV

FINAL EXPERIENCE

Terminal Objective

*For a definition of "actual teaching situation," see the inside back cover.

The **final experience** of each module always requires the instructor to demonstrate the competency in an actual teaching situation (see sample 12). There is no overview for this experience, nor any detailed directions. It is assumed that if the teacher is ready for the final experience, he/she knows what is involved in performing the competency.

The teacher's performance is assessed by you, the resource person, using the Teacher Performance Assessment Form (TPAF) provided in each module (see sample 13). This assessment form lists the criteria against which the teacher's performance must be judged and provides a scale for indicating how well the teacher has met each criterion.

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SAMPLE 13

TPAF EXCERPT

TEACHER PERFORMANCE ASSESSMENT FORM

Direct Students in Applying Problem-Solving Techniques (C-8)

Directions: Indicate the level of the teacher's accomplishment by placing an X in the appropriate box under the LEVEL OF PERFORMANCE heading. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name ____________________

Date ____________________

Resource Person ____________________

LEVEL OF PERFORMANCE

	N/A	None	Poor	Fair	Good	Excellent
1. The introduction was interesting and motivating	☐	☐	☐	☐	☐	☐
2. The introduction clearly identified the purpose (objective) of the lesson	☐	☐	☐	☐	☐	☐
3. The objective was one that lends itself to the use of problem-solving techniques	☐	☐	☐	☐	☐	☐
4. If a case study problem was used, it:						
a. was designed to help students meet the lesson objective	☐	☐	☐	☐	☐	☐
b. was well developed	☐	☐	☐	☐	☐	☐
c. included all the information needed by the students to work with the problem	☐	☐	☐	☐	☐	☐
5. The presentation included adequate directions for and guidance in:						
a. clearly identifying and defining the problem	☐	☐	☐	☐	☐	☐
b. identifying all major factors involved in the problem	☐	☐	☐	☐	☐	☐
8. The teacher involved students actively in solving the problem by asking questions, encouraging discussion, seeking feedback, etc.	☐	☐	☐	☐	☐	☐
9. The teacher's directions and guidance were such that the students should be able to use these same problem-solving steps to solve future problems.	☐	☐	☐	☐	☐	☐

Level of Performance: All items must receive N/A, GOOD, or EXCELLENT responses. If any item receives a NONE, POOR, or FAIR response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

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Chapter II

THE RESOURCE PERSON'S RESPONSIBILITIES

You, the resource person, are the single most important factor in conducting an effective performance-based teacher education or competency-based staff development program. Curriculum materials specially designed for PBTE/CBSD programs are important. A well-planned and well-structured PBTE/CBSD program is important. Physical resources (facilities and equipment) are also important. However, without one or more knowledgeable and competent professional educators assisting, guiding, evaluating, interacting, and helping the individuals pursuing the program, continued effective development of the desired teaching skills will not likely occur. It is this interpersonal dimension, so important to the individualization and personalization of the program, that you as a resource person must provide.

In carrying out the responsibilities of the resource person, it is necessary to function in several different roles. First of all, you need to wear the hat of **advisor**. In the advisory role, your responsibilities will include (1) interpreting the PBTE/CBSD program to the pre- or inservice teacher, (2) assisting in selecting appropriate skills for the teacher to pursue, and (3) assisting the teacher in determining what prerequisites should be met.

A second role of the resource person is that of **helper**, or facilitator. In this role, you provide assistance to the teacher when assistance is needed. Such assistance may include (1) answering the teacher's questions; (2) suggesting additional or optional resources and learning activities; and (3) arranging for the teacher to have access to materials, equipment, and teaching settings when needed.

A third major responsibility of the resource person is that of **evaluator**. Your evaluation responsibilities include (1) interacting with the teacher regarding his or her own self-evaluations; (2) helping the teacher evaluate the materials or products he/she has produced and, perhaps, videotapes of his/her own performance; and (3) assessing the teacher's performance of each teaching skill in an actual teaching setting (terminal objective).

The number of functions you perform as a resource person will depend upon the structure of the PBTE/CBSD program with which you are working, as well as the staffing pattern employed. In some inservice programs, someone from outside the institution (e.g., a field resource person employed by a university/college or a district director of staff development) may have the entire responsibility for providing all guidance, help, and evaluation assistance to a given instructor for the entire program. In other program structures, part of the responsibility for providing assistance to each teacher may be assigned to resident resource persons or master teachers within the teacher's own institution or agency.

In some preservice program structures, on-campus teacher educators serve as resource persons while the preservice teachers are on campus pursuing a set number of modules up to the final learning experience. A cooperating teacher, a clinical professor, a master instructor, or a resident resource person then assumes the resource person's responsibilities for guiding, assisting, and evaluating the teacher's performance in an actual teaching role (the modules' final experiences) during the field experience portion of the program.

Regardless of the extent of your responsibility as resource person, the role requires your commitment as a highly professional educator to promoting and improving the teaching profession. You can do this by providing guidance, assistance, and professional judgment in helping others develop the desired level of professional competence.

This section of the guide is designed to help you function effectively as a resource person. Your responsibilities are discussed more fully in relation to each of your several functions as a resource person, and techniques and procedures are suggested to assist you in carrying out your role.

Planning the Teacher's Program

Teachers entering a PBTE/CBSD program may very well find the concepts quite new and different from those of the subject-centered, group-oriented types of instruction to which they have been accustomed. You may be the first to explain the program to the teachers, and if not, teachers still are likely to have many questions about the program. You will also need to assess individual and group needs relative to the planned program and then help each teacher plan an appropriate program of competency development.

Teacher Orientation

One of the first questions a teacher is likely to ask is, What is CBSD or PBTE? The *Student Guide* has been developed to answer that question and many more questions about the modules and how to use them. Ensuring that each teacher in your PBTE/CBSD program has access to a copy of the guide can help your orientation effort. A color slide/tape presentation has also been developed to assist in orienting teachers to PBTE/CBSD and the curricular system.

You should also provide teachers with materials that explain **your specific PBTE/CBSD program.** Will teachers be required to complete an entire PBTE/CBSD program of specified modules? Is there a cluster of modules that is being substituted within an existing course structure to fully or partially replace conventional instruction? What modules are required of every teacher; that is, what modules form the basic core of the PBTE/CBSD program or of your course? What modules are optional? When do teachers start taking modules? Where? How long does the program take? How do teachers show they have successfully completed a module? How will they be graded?

Answers to these and other questions must be provided for your specific program and setting. A description of your program or course, including graphic explanations, will help you interpret your program, the teachers' role, and your role to your teachers. An *Implementation Guide* is available to help teacher education planners design PBTE/CBSD programs and develop answers to these questions.

Needs Assessment

Whether you are incorporating modules within your existing course structure or as part of a specifically designed PBTE/CBSD program, some decisions will need to be made concerning which modules specific individuals should take and, perhaps, the order in which they should be pursued. If teachers in the program have had no prior teacher training or experience, you may be able to assume that most of them will need all the core or required modules and that, with few exceptions, they should probably pursue the modules in an established sequence, as identified in the program or course description.

For teachers who may have developed adequate competence in several teacher tasks through on-the-job teaching experience and prior preparation for teaching, such an assumption may not be true at all. In that case, you will have to assess each individual's need for the required competencies and, if appropriate, the individual's need for the optional competencies available through your program.

As a preliminary indication of which competencies individuals might already possess, you can ask teachers to review the listing of modules in your course description or PBTE/CBSD program description and to check those in which they feel they have some degree of competence. You may then, through questioning, determine the nature and extent of experience or training they have had. In this way, you can help them decide whether to attempt to "test out" of these modules—to demonstrate competence in an actual teaching situation (the module's final experience) without having completed any of the earlier learning experiences in the module.

A listing of module titles and the performance elements covered in each module is included in appendix H. You and the teacher can examine these for each module in question to gain further information about the nature of the performance required in the module.

Before a final decision is made that an individual should attempt to test out of a module, you should direct him or her to examine closely the criteria on the Teacher Performance Assessment Form in the final learning experience of the module in question. When you make it clear that these are the criteria against which the performance will be judged, there should be little question in the instructor's mind regarding his/her readiness to perform the competency satisfactorily.

Competency/Module Selection

The competencies included in your PBTE/CBSD program may be listed in the form of module titles (see the back cover of this guide), which represent broad competencies. Or they may be listed in the form of the more-specific performance elements identified by Center staff during the research phase (job analysis) and then clustered for module development purposes.

If the latter approach is used, you can identify which modules cover which performance elements by using appendices B–G in this guide. Appendices B–G list the performance elements and numbers for each category of modules in the series, and appendix H indicates which performance elements (by number) are included in each module.

A PBTE/CBSD program leading to teacher certification may be rather rigidly structured, and teachers may thus have limited latitude in selecting the sequence of modules they will take. For example, a university teacher education program is likely to include a specified set of modules covering the skills required by the state's teacher certification standards.

Similarly, the certificates (recognition awards) provided by the National Association of Trade and Technical Schools (NATTS) to instructors in their member schools represent successful completion of specific modules. A certificate is awarded when an instructor documents that he or she has competence in all the skills covered by one of the sets of modules specified by NATTS for each of three professional development levels.

More flexibility in module selection will likely be available for the experienced teacher who has some degree of competence in a number of areas. In helping experienced inservice instructors select a program of modules, you should build on their interests and what you know about their teaching strengths and weaknesses.

You should encourage each teacher to start with a module that is likely to yield quick returns in terms of improved teaching and personal satisfaction. For example, if an inservice teacher's lesson introductions are weak (or missing) and students display a lack of interest and enthusiasm in the lessons, then Module C-10, *Introduce a Lesson,* may be a good place to start, perhaps followed by Module C-12, *Employ Oral Questioning Techniques.*

As modules are selected for an individual's program, it is important that prerequisite competencies for each module are considered and included in the plan. The prerequisite competencies for each of the PBTE/CBSD modules are shown in chart form on the inside back cover of both this guide and the *Student Guide* to aid you in quickly identifying prerequisites for any one or more modules.

The prerequisite competencies are stated (in the guides and in the individual modules) as module titles or numbers. However, the competencies that teachers possess should be recognized regardless of whether they were developed through module use or by some other learning approach.

Effort has been made to design modules with as few prerequisites as possible in order to maximize the flexibility you have in planning your PBTE/CBSD program. Some sequencing of modules is generally required, however, to avoid repetition of learning experiences among closely related competencies and to effectively build upon more basic competencies.

Another factor to be considered in module selection is the time required to complete each module. This would be of particular concern in planning a university-based program where module completion needs to be equated to a semester's or quarter's work. Even in a school-based staff development program, however, planning a realistic program of work involving modules is more easily accomplished if you have a general idea of how long it will take to complete each module. You can gain some indication of the time required to complete the initial 100 modules in Categories A–J by examining the time estimates determined as part of field testing (see appendix I).

In planning a schedule of module completion, you also need to be aware that two or more modules can sometimes be effectively pursued by a teacher at the same time. This is especially true for closely related modules, such as *Develop a Lesson Plan, Introduce a Lesson,* and *Summarize a Lesson.* This also enables a teacher to perform more than one competency during a single lesson presented in an actual teaching situtation, which can allow you to carry out your evaluation responsibilities more efficiently.

The modules selected or required should then be listed on a record-keeping form, such as the Personal Progress Record contained in the *Student Guide* and shown here in sample 14. Copies of each completed form should be available both for the teacher's reference and for your use in monitoring and recording teacher progress.

SAMPLE 14

PERSONAL PROGRESS RECORD

PBTE/CBSD Program

Name ______________________ **Subject Major** ____________________

Enter the date each learning procedure is completed.

Module No.	Module Title													Resource Persons

Guiding the Learning Activities

In assuming the role of resource person in a PBTE or CBSD program, you are not giving up the role of teacher educator or instructor trainer, although you will fulfill part of the role in a different manner. Your expertise in demonstrating effective teaching techniques and conducting seminars and group discussions is still needed. Furthermore, you still have responsibility for planning for and managing the activities that will best develop the needed instructional skills.

For instance, although the modules contain the activities and materials needed to develop a given skill, the materials and activities you have developed in the past may be appropriate as well. In fact, their use may be required in order to ensure that the modules prepare teachers for the specific educational system (state, district, local) in which they are or will be working. Likewise, your expertise is required for determining whether, for example, an optional activity provided in a module needs to be a required activity for the teachers with whom you are working.

Learning Experience Selection

Each module includes a series of enabling objectives (and related learning experiences) leading to the terminal objective and final experience: performance of the competency in the actual teaching situation. However, flexibility is provided within each module for instructors to complete only those learning experiences necessary for their specific needs. Through prior study or experience, individual teachers may already possess the knowledge or skill specified by a given enabling objective; if so, they may be able to bypass that learning experience.

In the procedures section on the inside back cover of each module, teachers are thus instructed to read the introduction to the module and to examine the module objectives as a first step in determining how much of the module they really need to complete in order to develop the specified competency. You may need to encourage and assist teachers in doing this, at least for the first few modules or until you are assured that sound decisions and choices are being made.

A teacher pursuing the module *Assess Student Performance: Knowledge*, for example, may very well say to you, "I know all about objective tests; I read all about them when I was a teaching assistant. Therefore, I don't need to do Learning Experience I." You may need to ask two or three well-chosen questions to determine whether the teacher does indeed have a firm grasp of the information presented in the first learning experience and is ready to proceed to other learning experiences covering other information or requiring application of the knowledge.

You must, of course, be thoroughly familiar with the content of the module in order to provide the necessary guidance to each learner in selecting or omitting learning experiences. You and the learners may find the Module Worksheet (sample 15) useful in assessing a learner's need for specific module learning experiences and in planning and coordinating the completion of module activities.

Reading Assignments

You may be able to assist learners in getting the most out of the information sheets by suggesting procedures to follow in studying the information provided. A procedure for studying information sheets that many find to be effective involves the following steps:

- Read through the entire information sheet quickly to get a "feel" for all of the concepts presented.
- Study the information sheet, section by section, and respond to the self-check items.
- Compare the self-check responses with the model answers.
- Reread those parts of the information sheet that were not understood accurately or adequately.

Completion of Feedback Devices Involving Self-Evaluation

Feedback activities in the module learning experiences often direct the instructor to "consult with your resource person." Module design is intended to encourage self-evaluation and develop teachers' skill in evaluating their own teaching performance. The majority of teachers completing modules appear to like the self-evaluations and carry them out conscientiously and successfully. However, teacher interaction with a knowledgeable, competent educational professional is often needed to provide reinforcement, clarify the concepts in the context of a specific setting, or answer any questions regarding the instructor's own evaluation.

The need for consultation and discussion may occur when instructors are comparing their own answers to self-check items with the model answers provided, when they are comparing their own critiques of a case study with the model critique provided, when they are comparing their own solutions to a case situation with the module solutions provided, or when they are using a checklist to rate their own performance.

SAMPLE 15

MODULE WORKSHEET

Name ______________________________

Module No. ______________ Module Title ______________

Resource Person(s) for this module:

Name ______________ Office ______________ Office phone ______________

______________ ______________ ______________

Check all the following study procedures as they are completed:

☐ 1. Read the INTRODUCTION
☐ 2. Read the ABOUT THIS MODULE section
☐ 3. Examine the OVERVIEW of each learning experience
☐ 4. Read the FINAL EXPERIENCE
☐ 5. Read the ABOUT USING THE PBTE MODULE SERIES section

Complete the following with the assistance and counsel of the resource person:

☐ 6. Assess present teaching competence
☐ 7. Determine need to complete prerequisite modules
☐ 8. Other activities: ______________________________

The following learning experiences have been decided upon:

	Completion Dates:	
	Planned	Actual
☐ 9. Learning Experience I	______________	______________
☐ 10. Learning Experience II	______________	______________
☐ 11. Learning Experience III	______________	______________
☐ 12. Learning Experience IV	______________	______________
☐ 13. Learning Experience V	______________	______________
☐ 14. Final Experience	______________	______________

The following conferences with resource persons have been scheduled (arrange only those needed):

	Dates
☐ Plan for completing learning activities	______________
☐ Arrange to obtain resources	______________
☐ Report on progress	______________
☐ Arrange for Final Experience assessment	______________

☐ Other ______________________________

You should be prepared to clarify points that are unclear, to provide additional examples, and if necessary, to explain the content in terms of a specific instructional setting or particular instructional area. You may need to suggest that the learner read additional materials that provide a more in-depth discussion of the points in question (e.g., the readings suggested in a learning experience or other references with which you are familiar).

Sometimes teachers are overly critical of their own responses; you may need to call their attention to the *Level of Performance* statement at the end of the model answers, which tells learners that their responses should have covered the same **major points** as the model answers. The model answers go into greater depth than the learner is required to provide in his/her responses; they are designed to provide a review of the key information to reinforce learning.

Some individuals will short-circuit the learning sequence by going directly from the information sheet to the model answers, without completing the self-check. Although this approach will likely result in some learning and reinforcement, much opportunity for learning is lost by omitting the study, review, analysis, and synthesis of information required to formulate responses to self-check items and to critique case studies.

An approach you might find useful is to orally pose other self-check questions that will verify whether the learner has assimilated the necessary information and concepts. If he or she has not, it should then be evident to the learner that skipping activities is detrimental to the learning process. Another, more painful, checkpoint is the final experience; individuals who reach the final experience unprepared will be unlikely to perform successfully and will need to recycle back through the module. They should soon discover that it is easier and more efficient simply to complete the necessary learning activities thoughtfully and thoroughly the first time.

Should it become evident that an individual needs to complete each full learning experience but lacks the self-discipline to do so, model responses and model critiques can be removed from the module. These can then be provided to the learner when he or she has presented a completed self-check that represents his/her honest efforts and ability.

Peer Involvement

Critiques of simulated performances, role-play activities, and discussions involving the use of peer groups are frequently suggested in module learning experiences. Sometimes it is not possible or practical to have peers available for participation in the learning experience as suggested. Whenever the use of peers is required, alternate activities not requiring the use of peers are almost always provided for those finding the use of peers impractical. In a few modules (e.g. *Employ the Team Teaching Approach)*, the use of peers is mandatory, and no alternative is provided.

You should, however, encourage peer interaction whenever possible because of several advantages it offers to teachers pursuing modules. Teaching is largely an interactive process; therefore, ample opportunities for interaction should be provided for those preparing to teach. Participation in small groups, which allows each teacher to learn through the success and errors of other group members, can prove to be the most efficient use of learners' time since fewer practice trials are required on the part of any one individual. In the same way, role-playing activities involving small groups allow all members to benefit from the experience, regardless of the specific role played by each member.

In deciding whether to be present when a teacher's performance is being critiqued by peers, you will need to use professional judgment, assessing the maturity of the group as well as the nature of the performance. Being judged by peers could be a very traumatic experience for a timid or sensitive individual, with the outcome being a negative rather than a positive learning experience for that individual. You need to be aware of such potential situations and ready to temper the tone of the discussion and critiques, supplying positive feedback, support, and encouragement as needed.

Observation and Interview Activities

To develop some competencies, such as using oral questioning techniques, observing the actual classroom performance of a real professional may be the ideal learning activity. For other competencies, such as organizing a vocational laboratory, interviewing a professional in his or her own laboratory may be ideal. For teachers in field experience programs, such activities should be fairly easy to arrange.

Inservice instructors, however, may have little time to observe others if they are carrying a full teaching load. You would, therefore, need to assist each instructor in finding opportunities to observe other instructors, perhaps during planning periods and free periods. Your assistance in making or encouraging arrangements can help the instructors overcome any hesitancy in contacting other professionals and making their needs known. It will also help to make such observations and interviews truly professional growth experiences.

For on-campus preservice teachers pursuing modules, making satisfactory arrangements for

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these individuals to observe and interview on-the-job teachers prior to the field experience portion of the program can pose more difficult problems. You need to guard against excessive disruption of normal school activities or excessive demands on the time and hospitality of teachers in schools that happen to be located near the campus.

Several approaches can be taken to provide excellent opportunities for teachers to observe or interview top teachers:

- Make one or more videotapes of the specific teacher performances the teachers need to observe.
- Make video- or audiotapes of one or more individuals conducting the needed teacher interviews.
- Bring highly competent teachers onto the campus for interviews with large groups of teachers concerning one or more module learning activities.
- Arrange group field trips to one or more nearby schools to carry out observations and interviews.
- Use color slides to illustrate specific skills, such as effective methods for storing materials and equipment in the vocational laboratory.
- Identify observation and interview activities needed in a number of modules prior to teachers' spending a week or two in the field for observation purposes.

You can probably add several more suggestions that may be appropriate to your specific setting.

Videotaped Performances

Videotapes of the learner's performance can provide excellent feedback, both to the learner and to you in helping him or her to self-evaluate and improve performance. Judicious use of microteaching, focusing upon single key teaching performances, can add immeasurably to effective learning and the development of the needed teaching skills. Module learning experiences often suggest videotaping learner performance as an optional learning activity. If you and your teachers have access to videotape equipment, you are encouraged to take advantage of this excellent teaching-learning tool.

Development of a library of carefully chosen videotaped performances can also provide an excellent source for you and the teachers-in-training. A variety of exemplary teaching performances can be saved to provide models; a variety of less-than-exemplary performances can be judiciously selected and used for critiquing activities.

Videotaping can be time-consuming for the performer, the peers who serve as the "students," and you as the resource person who may need to make all arrangements for equipment, space, scheduling, and analysis of the videotape with the performer. It is, therefore, essential that videotaping be used only for those teacher performances in which it can provide the most effective form of feedback. Videotaping lesson introductions, lesson summaries, and oral questioning can be very effective and, thus, appropriate. However, its use for lesson planning and writing a news article would obviously be inappropriate.

Use of videotapes for self-evaluation purposes may not be new to some teachers; however, others may need more introduction to the equipment and to the reality of seeing themselves on television. You may find the use of Module C-27, *Present Information with Televised and Videotaped Materials*, appropriate for introducing learners to the equipment and its proper use. Each individual should have the opportunity to view and hear him/herself on the television monitor long enough to ensure that the novelty has worn off prior to his/her first taping session. The instructor needs to become acquainted with that strange image and voice that turns out to be his/her own.

Following the first one or two taping sessions, you may want to give the performer the opportunity to privately view the tape prior to discussion of his/her performance with you and/or peers. If the performance is very poor and the weakness is obvious to the performer, you may need to give the teacher the opportunity to redo the performance prior to evaluation and the discussion of evaluation forms.

Inservice teachers and student teachers may be able to arrange to use the school's videotape equipment for taping entire class sessions or specific activities for which feedback is desired. If not, portable equipment might be periodically made available to the teacher. Scheduling the use of videotape equipment on campus will be influenced by the availability of the equipment and space, and any rules and constraints regarding their use. You should be able to adapt the system for scheduling peer interaction to include sign-ups for videotaping sessions.

Product Reviews

The more immediate the feedback you provide learners, the more effective you can be in improving their performance. This holds true when performance involves a **written product**, such as a lesson plan, proposed publicity items, or a letter to advisory committee members. Teachers can lose interest if their written work is not evaluated and returned to them soon after it has been completed.

Quality checklists are generally provided in module learning experiences requiring written products, and learners are often instructed to evaluate their own work and then to check with their resource person only if they have questions about the written product or the evaluation. In some learning experiences, the learner is instructed to present his/her work to the resource person for evaluation.

You can help make this procedure work effectively for the learner by being available to answer questions and by ensuring that you review and evaluate products shortly after they are dropped in your "in" box. When your written comments are not sufficient and it is evident that the individual needs more help, then a "See Me" note can be attached to the materials before placing them in the "out" box. The instructor can then make arrangements to discuss the product with you.

When learning experiences call for the development of a **project** or a **display**, you should make sure that all needed materials and equipment are available and that necessary space is provided for the display of the materials developed. For example, the development of a bulletin board display for creating interest in a unit of instruction may require several different types and colors of paper and cardboard, lettering devices, cutting equipment, colored pens, and a place to display the finished products for critique and evaluation.

For the inservice teacher and the preservice teacher in a field experience program, these requirements may be readily found within the teaching setting, and you may need only to assist teachers in finding out where they are located and how to gain access to them. Many teacher education departments make these materials available to individuals within the department or through the book store. Whatever the procedures, you need to make this information available to the teachers and to provide the necessary space for display and critique purposes. You may need to develop a schedule for use of the display area in order to accommodate everyone's needs.

Helping Conferences

You are responsible for providing feedback to teachers concerning their performance as they develop, practice, and demonstrate teaching competencies. Effective conferences are characterized by advanced planning and the use of clinical supervisory techniques that help the instructor analyze, interpret, and arrive at decisions in a self-directed and constructive manner.

A record of the teacher's performance is needed. If the skill is a teaching process, then the record of performance may be a videotape, an audiotape, or the notes from your personal observation. When the skill involves a product (such as a lesson plan), then the product itself serves as the record of performance.

The conference with the instructor may be viewed as a five-step process:

- You **display** the data recorded during the observation, without evaluative comment.
- The instructor **analyzes** what was happening during the performance as evidenced by the data. You simply help clarify what behaviors the recorded data represent.
- The instructor, with your help, **interprets** his/her behaviors and/or those of the students as represented by the observational data. At this stage, the instructor's observations become more evaluative since causes and consequences must be discussed as desirable or undesirable. Module checklists and performance assessment forms are valuable tools in carrying out this step.
- The instructor, with your assistance (or guidance), **decides** on alternative approaches to use in the future to remedy problems with the observed performance or to build on those aspects that were satisfactory.
- You **reinforce** the instructor's announced plans for change or help the instructor modify the plans if there is some disagreement.[3]

Field Experiences

Arranging field experiences for inservice instructors does not normally pose a problem because the instructors have opportunities to plan for, practice, and perfect their teaching skills in carrying out their regular teaching responsibilities. Opportunities for on-campus preservice teachers to practice or demonstrate teaching competencies in an actual teaching situation prior to student teaching or an internship program may be quite limited, however.

You may be able to expand these opportunities by taking advantage of teaching-learning settings in college classrooms. Teachers may, for example, be able to participate in the instruction of some of their own and other technical subject-matter courses. Considerable caution should be exercised, however, to avoid placing teachers in a completely foreign environment that would yield invalid assessments of their abilities as teachers.

Opportunities within the college can be sought for teachers to demonstrate concepts, principles, or manipulative skills; to present information through the use of one or more types of audiovisual equipment and materials; or to assess student performance. Other opportunities to provide assistance

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[3] The five-step process is adapted from work done by E. K. Allen at Indiana University of Pennsylvania.

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should be explored for their potential in developing teaching competence and in making a contribution to the college instructor and the class.

If the competency to be practiced or demonstrated requires sustained contact with and considerable knowledge of the students, these college teaching-learning settings would not, of course, be appropriate. In addition, assistance to your teachers should never interfere with the normal progress of the college class.

You can also encourage teachers to take advantage of the numerous opportunities to participate in instructional roles with community groups. Opportunities to try out and practice a wide range of teaching skills are available with such community groups as Girl Scouts, Boy Scouts, church schools, 4-H Clubs, hobby clubs, avocational night courses, and adult education courses. You need to become aware of such opportunities in your community so that you can help your teachers take advantage of them as they pursue module learning experiences.

Optional and Alternate Learning Activities

Optional learning activities generally provide enrichment and reinforcement. Alternate activities are provided as substitutes for required activities which might be highly desirable but which may not be feasible in some settings in which the module will likely be used. As the resource person, you will need to use your **knowledge** of the setting and of the individuals' interests and needs and your **professional judgment** in encouraging or sometimes requiring individuals to pursue certain optional or alternate learning activities. Of course, it is best if you can lead the individual to personally make the decision most appropriate to the need and setting.

Remember that additional, situation-specific optional learning activities are always appropriate. You should supplement the module activities with readings, videotapes, slides, discussions, and other resources that are especially appropriate to your teachers' needs, to the setting, and to the instructional area.

Assessing Teacher Performance: The Final Experience

In the PBTE/CBSD modules, assessment of teacher progress is a continual process. Some of the feedback is provided by model answers or model critiques, which are immediately available to teachers upon completion of a self-evaluation activity. Feedback is sometimes provided to instructors through some type of checklist that they use themselves to evaluate their lesson plans or other products. Additionally, feedback is often provided on at least one learning experience by one or more peers and/or the resource person.

The real test comes, however, when the teacher reaches the final experience in which he or she must actually demonstrate ability to perform the given competency under real teaching circumstances. The final experience also places special responsibility on you, the resource person, as it is you who must make as objective and as fair a decision as possible about the teacher's level of competence.

Although the design of the modules helps in the objective assessment of performance, your professional judgment must also be exercised in making the final assessment. You must also have the courage to insist that a teacher repeat a learning experience, or at least part of it, if in the final experience, the teacher's performance has not been an effective (satisfactory) one. Of course, it is best to suggest that the teacher practice more or prepare further **prior to** attempting the final experience if you can detect that he or she is not yet ready.

Teacher Readiness

Before arrangements are made for the teacher to demonstrate the competency in an actual teaching situation, you need to make an informed judgment about the individual's readiness. If you have been helping the teacher and monitoring his/her progress through the various learning activities, you should have a reasonably good idea of the individual's likelihood of success.

Before scheduling a final assessment, however, it is recommended that a short conference be held with the teacher to review his or her progress and evaluate his or her readiness by checking the teacher's performance on previous learning experiences. This can be done by reviewing the completed self-checks, products developed, peer evaluations, and so forth. You may also wish to orally quiz the instructor to assess his/her cognitive understanding of the concepts and principles that are basic to performing the given competency in an effective manner.

If other resource persons have also worked with the teacher, you may want to check with them regarding their reactions to the individual's readiness. Finally, you may want to ask the instructor to express his/her own feelings about how ready he or she feels. The amount of confidence expressed will often be a good indicator of the individual's ability to perform effectively. With these kinds of inputs, you should have no difficulty in making a well-informed decision about the teacher's readiness.

Arrangements to Be Made

For interns, student teachers, or inservice instructors, arranging for the final assessment will usually be fairly easy. Except during vacation periods, numerous classroom, laboratory, and other teaching situations are usually readily available to them. It is mostly a matter of their deciding on the date, time, and place, and then arranging with their resource person to be present if necessary to observe and evaluate the performance.

In the case of on-campus preservice teachers, however, you may need to make the necessary arrangements or, at least, to help make them. Thus, you will need to identify nearby schools and teachers who would be able and willing to help provide the necessary opportunities. Another option, and in most cases the preferred one, is to defer the final experience until the individual starts student teaching or an intern experience.

Once you and the teacher have agreed on a mutually convenient date and time, arrangements should be made with the appropriate personnel and through the appropriate channels. Often, previous arrangements for student teaching, observation experiences, and the like, will have already been made with the approval of local boards of education; the superintendent, principal, or vocational director; and selected vocational-technical teachers. The same established channels and procedures will normally be adequate for setting up final assessments. Once approval has been obtained, such arrangements are usually quickly and informally made.

The TPAF

The Teacher Performance Assessment Form (TPAF) is the last instrument in every module. It consists primarily of a series of process/product statements that identify the essential criteria to be used in evaluating the teacher's performance. Each TPAF also has four other components: (1) directions for its use; (2) space for recording the teacher's name, the date, and the name of the resource person; (3) a rating scale; and (4) a statement describing the expected level of performance to be achieved (see sample 13, p. 25).

Each TPAF is identified by module title, and each provides directions for its use. On the left-hand side of the form is the list of performance components considered critical to successful demonstration of the specific competency in question. The number of performance components (or criteria) usually ranges from a minimum of 10 items to as many as 30 or 35 items.

On the right-hand side of the TPAF, a level-of-performance scale indicates the various ratings—*N/A, None, Poor, Fair, Good,* and *Excellent*—that can be given for each item. In order to help ensure uniformity in the ratings used, the terms are defined as follows:

- **N/A**—The criterion was not met because it was **not applicable** to the situation.
- **None**—The teacher made **no attempt** to meet the criterion, although it was relevant.
- **Poor**—The teacher is unable to perform this skill or has only **very limited ability** to perform it.
- **Fair**—The teacher is unable to perform this skill in an acceptable manner, but has **some ability** to perform it.
- **Good**—The teacher is able to perform this skill in an **effective** manner.
- **Excellent**—The teacher is able to perform this skill in a **very effective** manner.

Observation/Assessment

The observation of teachers who are completing the final experience is one of the most important tasks you must complete. The final experience of each module is the point at which the instructor is asked to "put it all together"—to integrate the background knowledge, the proper attitudes, and the skills practiced in earlier learning experiences into a meaningful, realistic, and very effective demonstration of competence.

The instructor will, in most cases, have worked hard to prepare for this demonstration, and it is very important that you observe the total performance if at all possible. At this point, you need to be an active listener/observer and as objective as possible.

Although the specific situation and competency to be demonstrated will influence the observation procedure and the required length of observation, several guidelines are offered here to help ensure objective and fair observation:

- Be thoroughly familiar with the objectives and content of the module covering the competency being performed.
- Be as familiar with the setting as possible. The more you know about the school, the class, the students, and their regular teacher, the better you will understand the environmental factors that might influence the teacher's performance.
- Be sure the instructor knows in advance the criteria against which his/her performance will be assessed.
- During the observation, try to be as unobtrusive as possible so that the teacher and the students

are not affected by your presence to any great extent.

- Remember always that you are observing the individual's performance as a teacher, not the individual as a person.
- Try to observe more than one performance during any given observation period. Often, several competencies can be assessed during one visit or even one class period.

After the competency has been performed, you should complete the TPAF as soon as possible. You may also want the instructor to fill out the same form at the same time as a kind of self-assessment. A conference should follow completion of the TPAF so you can discuss with the teacher the various ratings given and the reasons for them. You should use tact and professional judgment in conducting the assessment conference.

Teachers will, in some cases, be nervous about performing; their anxiety levels could be raised to an unnecessarily high degree by critical comments or a lack of encouraging remarks where they are deserved. It is your responsibility as a resource person to set the tone of the assessment conference so as to ensure positive results in what, to many, may be viewed as a very threatening situation. It is an opportunity to really enhance the resource person–teacher relationship if properly handled. Above all, strive for objectivity and fairness, while showing sincere concern for the instructor as a person.

Recycling

If a good job has been done in assessing each teacher's readiness for the final experience, there should be few cases in which a teacher does not achieve at least the minimal level of competence the first time he or she performs the skill. However, if the objective assessment of an individual's performance indicates that competence (at least a *Good* rating on all applicable criteria) has not been achieved, then you need to ask the instructor to recycle—to repeat some of the module's learning activities, to complete optional enrichment activities, or to complete whatever special learning activities you mutually deem appropriate for removing the deficiencies.

Before a teacher is asked to recycle, however, you should always carefully explain why you feel such action is professionally sound and necessary. Although recycling may seem to be harsh treatment, in the long run both the instructor and the teaching profession will be better off because of your insistence on quality.

Chapter III

MANAGING THE ROLE OF THE RESOURCE PERSON

The management of a PBTE or CBSD program rests largely upon your shoulders as a resource person. In fact, you are the individual who, in all likelihood, will make the program go. If you are to do an effective job in carrying out all the advising, helping, and evaluating tasks of the resource person, then the management of this role is a critical matter. You will need to be familiar with your PBTE/CBSD program procedures and the content of the modules. You will also need to budget your time and keep adequate and accurate records.

Getting Ready

Your specific role and responsibilities and the processes and procedures for fulfilling that role will vary depending on your PBTE/CBSD program design and staffing structure. Resident resource persons working with teachers in a single institution, field resource persons working with teachers in a number of institutions, teacher educators, master teachers or lead instructors, industry trainers, and staff developers all need to be trained for their roles as resource persons.

How might you become knowledgeable about general program procedures and module content? Ideally, you would participate in a training workshop. The Center at Ohio State and the National Association of Trade and Technical Schools (NATTS) periodically offer training workshops for PBTE/CBSD resource persons. Some institutions conduct their own resource person training programs.

These training efforts may vary from a minimum of a two-day workshop to a more highly structured resource person training and development program that uses modules and a seminar series to enhance resource person skills on an ongoing basis. Discussions with others who have been trained and have served as resource persons in using the PBTE/CBSD materials can also be very effective.

Regardless of who conducts the training, you need an understanding of (1) the organization and scope of the PBTE/CBSD module series, (2) the module structure, and (3) the procedures for using modules. The first chapter of this guide and the appendix materials are provided to help you develop this understanding. In addition, you need to become familiar with the general terms used in all modules. For example, the term *teacher* or *instructor* refers to the person who is completing the module; the term *student* refers to the person who receives occupational instruction in a secondary, postsecondary, or other training program.

You will also need to have a thorough knowledge of each of the modules used in your program. The only way to gain this knowledge is to study each module. As you read through each module, you should make a list of all the outside resources needed so you can arrange to make them available to the teachers. It is extremely difficult to provide effective learning experiences for instructors if they do not have easy access to all the materials needed for each learning activity.

It is essential that you are knowledgeable about the total PBTE/CBSD program, are totally familiar with the terms used in each module, have studied each module to be used, and have acquired all the resource materials required in every learning activity in each module. Without these four elements, it will be extremely difficult for you to guide a teacher through the PBTE/CBSD program. A superficial awareness of the content of each module is not enough.

Scheduling

Numerous scheduling concerns must be dealt with in order to facilitate and enhance teachers' module work. You need to monitor module completion to ensure that timely progress is being made. You need to schedule your time so that you are available to work with teachers when they need help. And you need to provide some sort of procedure that will allow and encourage teachers to work together on activities.

Module Completion

In the operation of a PBTE/CBSD program, one real difficulty is the problem of completing the modules in a reasonable period of time. The independent study and self-pacing aspects are considered to be strengths of the program, but at some point a teacher must be expected to have completed a specified number of competencies.

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However, there is a tendency for some teachers to postpone final assessments and to allow uncompleted modules to stack up. This poses serious problems for both you and the teacher; it soon becomes difficult, if not impossible, to schedule the needed performance assessments into the short remaining period of time. You need to provide guidance to prevent this from becoming a serious problem.

The PBTE/CBSD materials may be used with both preservice and inservice instructors, and you must be aware of and sensitive to the differing requirements of these two groups. In scheduling time for module completion, it is important to consider the individual instructor.

A copy of the Module Worksheet (see sample 15, p. 32) is included in the *Student Guide* for use in helping instructors set goals for module completion and to assist in helping them move toward those goals. When a teacher has established realistic target dates and documented them in writing, these dates can serve as a motivational force for completing each module.

Consultation Hours

Generally, you will have responsibilities other than monitoring the PTBE/CBSD program. Therefore, a vitally important aspect to consider is the scheduling of your time. Since teachers can complete modules on an individualized basis and at their own pace, it becomes important in the management of time that you have some control. If not, you are likely to find every working hour of every day devoted to advising, evaluating, and guiding teachers.

Consequently, you need to provide instructors with a specific schedule of times when you are available for consultation or advice. In the event that more than one person is serving as resource person, time should be scheduled in such a manner that there is a resource person available throughout each working day. This maintains the concept of individualization and self-pacing in that assistance is available to teachers at all times and they can thus get the help or feedback they need when they need it.

It must also be noted that, in every module, the final experience always takes place in an actual teaching situation with resource person assessment. A scheduling scheme for both resource persons and teachers to use in arranging both individual consultations and observations of performance is an important phase in the management of a PBTE/CBSD program.

Sample 16 is suggested as a possible device to use in scheduling your time. Posting a schedule, such as the one shown in sample 16, in a location accessible to all teachers allows them to schedule a meeting with or an observation by a resource person as necessary.

SAMPLE 16

CONSULTATION SCHEDULE

Date April 1	**Hours Available**									**Time**
Resource Person/ Location	**8–9**	**9–10**	**10–11**	**11–12**	**12–1**	**1–2**	**2–3**	**3–4**	**4–5**	**Intervals**
Joe Steele (University Hall)	X	Olson Larson Anderson Johnson		X	X	Norton	Jones	X	X	**15 min. 15 min. 15 min. 15 min.**
Mary Walsh (Training Center)		X	X		X	X	Meyer Carlson	Split		**15 min. 15 min. 15 min. 15 min.**
Harry Andrews (Johnson Senior High School Voc. Dept.)	X	X	X	Sternberg Hamilton		X	X			**20 min. 20 min.**

Peer Group Activities

When a learning activity calls for the involvement of peers (usually 1–5 persons), problems can arise in ensuring that peers are available when and where needed and are prepared to participate. One solution to this problem is to use sign-up sheets on the scheduling board in a resource center or training center. Using this approach, an individual who is ready for the involvement of peers in a learning activity puts up a sign-up sheet listing his/her name, the module number, and the learning experience he/she is ready to pursue. A suggested date and time should also be shown.

For example, if the individual is ready to demonstrate a manipulative skill to a group of peers, as suggested in Learning Experience II of the module *Demonstrate a Manipulative Skill*, the sign-up sheet might read as follows:

Module C-19	Learning Experience IV	(Demonstrate a Manipulative Skill)
	Suggested Time	
Sue Black	Monday, October 10 1:00 p.m.	

Peers (often individuals who are pursuing the same module) may then add their names to the list, indicating alternate times if they cannot be available at the time suggested. When the required number of peers is signed up, with a time agreed upon, the next individual ready for peer involvement would start a new sign-up sheet for that learning experience. Each small group would then schedule additional meetings, if needed, to complete the peer interaction needed by all members for that learning experience.

This approach places more responsibility for learning on the individual. It also makes it possible for you to coordinate activities and to be available when needed. If you use this approach, you may find it necessary to do some scheduling of your own to ensure that no one is neglected and that everyone has the needed opportunities for interaction with peers.

A variation of this approach would be for you to identify all the learning experiences suggesting or requiring peer involvement and then to schedule specific time blocks for each peer activity, with a specified number of sign-up slots for presenters and observers allotted for each time block. Teachers would then place their own names in the appropriate slots as they become ready for the learning experience specified. You can help ensure adequate peer group participation if, when modules are being used within a course structure, you **require** that each teacher participate in a specific number of peer groups.

Large- and Small-Group Activities

Another aspect of resource person management is the scheduling of instructors for group instruction. The PBTE/CBSD program provides opportunities for you to schedule large-group instruction and small-group discussion sessions.

The use of **large-group instruction** will be most successful if several instructors are working on a specified set of modules. A large-group meeting can provide opportunities for you to present information not included in a module and for teachers to discuss and resolve problems being encountered in the modules. A number of teacher questions and concerns can be clarified in these meetings.

In the early stages of a PBTE/CBSD program, it is extremely helpful to schedule large-group meetings on a daily basis for 30- to 60-minute periods. After four or five of these daily sessions, regular large-group meetings could be scheduled (e.g., once a week) until the program ends.

Caution should be exercised regarding the potential overuse of large-group meetings. There is a tendency on the part of some resource persons to revert to the role of presenter of information and for the large-group discussion sessions to become a primary instructional vehicle. This places a dual load on teachers: regular class requirements plus completion of modules. If this is allowed to occur, reactions to the class and to the PBTE/CBSD program will certainly be less then positive.

The use of **small-group discussions** is another effective means of clarifying points that are not clear to teachers. In these sessions, two to five (or more) teachers can spend a short time discussing some issue or issues with you. You should recognize the importance of these informal sessions with teachers. The interpersonal communication they provide can prove to be extremely valuable in the smooth operation of a PBTE/CBSD program.

Record Keeping

Teacher progress through the modules must be monitored and documented. Thus, you must establish and maintain a record-keeping system that provides for indicating when each learning experience is completed, as well as the date of the final performance in each module and the level of performance achieved.

It is suggested that you organize a notebook in which you can record each teacher's progress on each module. Copies of the Personal Progress Record form (see sample 14, p. 30) are provided in the *Student Guide* and can be used for your progress records as well as for the teacher's own records.

The Vocational Teacher Competency Profile shown on pp. 45–46 of this guide can also be used both as a record of instructor progress and as a device for explaining your program to teachers. Modules that are to be completed in your program can be identified on the chart, perhaps by highlighting them with a marker. Then, upon completion of each module, the competency rating can be entered in the small box provided on the chart for each module title.

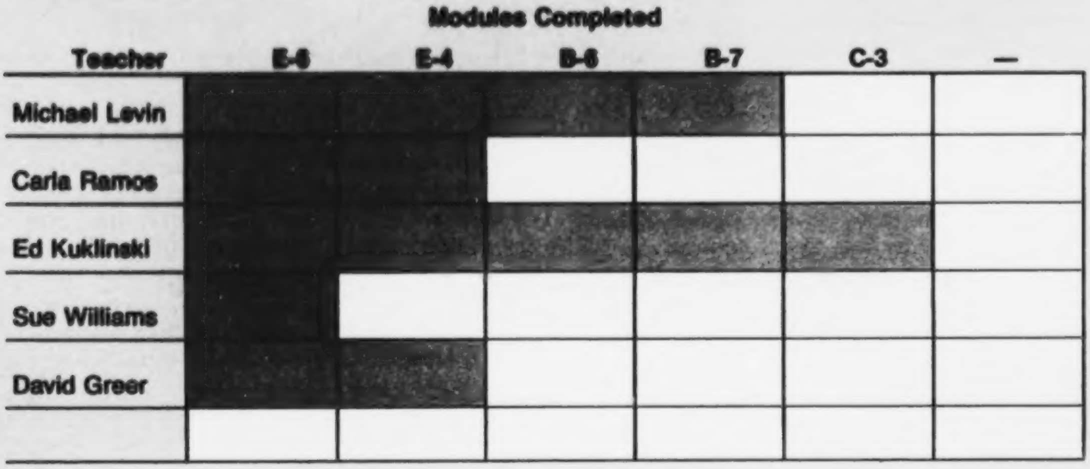
It may be helpful to you to document group progress as well. This can help you in scheduling group activities. Sample 17 is suggested as a means of indicating group progress through the PBTE/CBSD program.

SAMPLE 17

PROGRESS CHART

Course/Program Title ______________________________

____



Modules Completed

Teacher	E-6	E-4	B-6	B-7	C-3	—
Michael Levin	■	■	■	■		
Carla Ramos	■	■				
Ed Kuklinski	■	■	■	■	■	
Sue Williams	■					
David Greer	■	■				

Improving Your Skills as a Resource Person

The instructors in your program should be expected to assume a professional responsibility to continually improve, perfect, and expand their teaching skills. It is necessary that you as a resource person serve as a role model and also continually seek ways to improve, perfect, and expand your resource person skills.

Experienced resource persons often find that they can improve their effectiveness by further developing their observational and recording skills, conferencing skills, and evaluation skills. Other areas of need may include learning to use videotaping equipment skillfully, to schedule and coordinate activities more efficiently, and to manage peer group activities more effectively.

You may need to aggressively pursue opportunities to further develop your resource person skills. Although for most resource persons no set pattern of opportunities exists, an array of potential sources should be explored. Some PBTE/CBSD programs have a formal resource person training program.

Help with many of the above topics may also be available through outside workshops and seminars, university course work, in-house workshops addressing problems and concerns of the PBTE/CBSD program, and one-to-one contact with and observation of other resource persons. And, of course, individual reading and study of professional resources is always appropriate.

The list of resource person do's and don'ts shown in sample 18 provides a concise summary of key points that are important in successfully fulfilling the role of resource person.

SAMPLE 18

RESOURCE PERSON DO'S AND DON'TS

DO	DON'T
EXPLAIN WHAT PBTE/CBSD IS	JUST GIVE OUT THE *STUDENT GUIDE*
USE THE MODULES AS AN AID	RELY TOTALLY ON THE MODULES
SUPPLEMENT AND ADAPT THE MODULES AS APPROPRIATE	FORGET YOUR TEACHERS' UNIQUE NEEDS AND INTERESTS
EXPECT TEACHERS TO NEED HELP	EXPECT THE MODULES TO BE SELF-INSTRUCTIONAL—THEY ARE NOT
SCHEDULE SMALL-GROUP DISCUSSIONS	TELL TEACHERS TO WORK ALONE
SCHEDULE TIME FOR INDIVIDUAL CONFERENCES	IGNORE INDIVIDUAL TEACHERS' NEEDS
HELP TEACHERS ASSESS THEIR NEEDS AND INTERESTS	LET TEACHERS SELECT MODULES BY THEMSELVES
CONDUCT LARGE-GROUP DISCUSSIONS	LECTURE ON THE SAME CONTENT AS COVERED BY THE MODULES
MONITOR TEACHER PROGRESS	LEAVE EVERYTHING TO THE TEACHERS
PROVIDE FREQUENT FEEDBACK TO TEACHERS	RELY COMPLETELY ON PAPER-AND-PENCIL TESTING
STRIVE FOR OBJECTIVE ASSESSMENT	EXPECT TO ACHIEVE COMPLETE OBJECTIVITY
ALLOW FOR DIFFERENT LEARNING STYLES	REQUIRE THE SAME ACTIVITIES OF EVERYONE
ALLOW TEACHERS TO PROGRESS AT THEIR OWN RATE	EXPECT ALL TO ACHIEVE COMPETENCE AT THE SAME TIME
FACILITATE PEER GROUP DISCUSSIONS	EXPECT TEACHERS TO GET TOGETHER BY THEMSELVES
FACILITATE FIELD EXPERIENCES	LEAVE ALL ARRANGEMENTS TO THE TEACHERS
TRAIN FIELD RESOURCE PEOPLE	NEGLECT THE PREPARATION OF FIELD SUPPORT PERSONNEL
MANAGE YOUR TIME WISELY	EXPECT MODULES TO REQUIRE LESS WORK ON YOUR PART
STUDY THE *RESOURCE PERSON'S GUIDE*	HESITATE TO READ IT AGAIN
SERVE AS ADVISOR, HELPER, AND ASSESSOR	SHIRK YOUR RESPONSIBILITIES AS RESOURCE PERSON

COMPETENCY RATING SCALE

1. Poor: The teacher is unable to perform this skill or has only very limited ability to perform it.
2. Fair: The teacher is unable to perform this skill in an acceptable manner but has some ability to perform it.
3. Good: The teacher is able to perform this skill in an effective manner.
4. Excellent: The teacher is able to perform this skill in a very effective manner.

VOCATIONAL TEACHER COMPETENCY PROFILE

Name ______________________ Address ______________________

Institution ______________________ Date Started ______________________

Resource Person(s) ______________________

The competencies listed on this profile represent the titles of the performance-based teacher education (PBTE) modules that have been developed, field tested, and revised by the Center at The Ohio State University. Each module addresses one or more competencies identified, through research conducted by the Center, as important to secondary and postsecondary vocational teachers and other occupational trainers.

These modules and four supporting documents—a student guide, a resource person's guide, an implementation guide, and a state-of-the-art report—were developed and tested pursuant to contracts with the National Institute of Education, the U.S. Office of Education, and the U.S. Department of Education.

PBTE

SUPPORTING MATERIALS

Implementation Guide for PBTE & CBSD Programs, Second Edition, by Glen E. Fardig.

Resource Person's Guide to Using Performance-Based Teacher Education Materials, Second Edition, by James B. Hamilton.

Student Guide to Using Performance-Based Teacher Education Materials, Third Edition, by Robert E. Norton, May Huang, and Lois G. Harrington.

Performance-Based Teacher Education: The State of the Art, General Education and Vocational Education by Robert E. Norton, Lois G. Harrington, and Janet Gill.

Developed by:

CENTER ON EDUCATION
AND TRAINING FOR EMPLOYMENT
THE OHIO STATE UNIVERSITY
1900 KENNY ROAD·COLUMBUS, OHIO 43210

formerly the National Center for Research in Vocational Education

Published by:

AAVIM
AMERICAN ASSOCIATION
FOR VOCATIONAL
INSTRUCTIONAL MATERIALS
The National Institute for Instructional Materials
120 Driftmier Engineering Center
The University of Georgia
Athens, Georgia 30602

Category	Competencies										
A Program Planning, Development, and Evaluation (11 modules)	A-1 Prepare for a Community Survey	A-2 Conduct a Community Survey	A-3 Report the Findings of a Community Survey	A-4 Organize an Occupational Advisory Committee	A-5 Maintain an Occupational Advisory Committee	A-6 Develop Program Goals and Objectives	A-7 Conduct an Occupational Analysis	A-8 Develop a Course of Study	A-9 Develop Long-Range Program Plans	A-10 Conduct a Student Follow-Up Study	A-11 Evaluate Your Vocational Program
B Instructional Planning (6 modules)	B-1 Determine Needs and Interests of Students	B-2 Develop Student Performance Objectives	B-3 Develop a Unit of Instruction	B-4 Develop a Lesson Plan	B-5 Select Student Instructional Materials	B-6 Prepare Teacher-Made Instructional Materials					
C Instructional Execution (29 modules)	C-1 Direct Field Trips	C-2 Conduct Group Discussions, Panel Discussions, and Symposiums	C-3 Employ Brainstorming, Buzz Group, and Question Box Techniques	C-4 Direct Students in Instructing Other Students	C-5 Employ Simulation Techniques	C-6 Guide Student Study	C-7 Direct Student Laboratory Experience	C-8 Direct Students in Applying Problem-Solving Techniques	C-9 Employ the Project Method	C-10 Introduce a Lesson	C-11 Summarize a Lesson
Instructional Execution (Cont'd)	C-12 Employ Oral Questioning Techniques	C-13 Employ Reinforcement Techniques	C-14 Provide Instruction for Slower and More Capable Learners	C-15 Present an Illustrated Talk	C-16 Demonstrate a Manipulative Skill	C-17 Demonstrate a Concept or Principle	C-18 Individualize Instruction	C-19 Employ the Team Teaching Approach	C-20 Use Subject Matter Experts to Present Information	C-21 Prepare Bulletin Boards and Exhibits	C-22 Present Information with Models, Real Objects, and Flannel Boards
Instructional Execution (Cont'd)	C-23 Present Information with Overhead and Opaque Materials	C-24 Present Information with Filmstrips and Slides	C-25 Present Information with Films	C-26 Present Information with Audio Recordings	C-27 Present Information with Televised and Videotaped Materials	C-28 Employ Programmed Instruction	C-29 Present Information with the Chalkboard and Flip Chart				
Instructional Evaluation (6 modules)	D-1 Establish Student Performance Criteria	D-2 Assess Student Performance: Knowledge	D-3 Assess Student Performance: Attitudes	D-4 Assess Student Performance: Skills	D-5 Determine Student Grades	D-6 Evaluate Your Instructional Effectiveness					
E Instructional Management (10 modules)	E-1 Project Instructional Resource Needs	E-2 Manage Your Budgeting and Reporting Responsibilities	E-3 Arrange for Improvement of Your Vocational Facilities	E-4 Maintain a Filing System	E-5 Provide for Student Safety	E-6 Provide for the First Aid Needs of Students	E-7 Assist Students in Developing Self-Discipline	E-8 Organize the Vocational Laboratory	E-9 Manage the Vocational Laboratory	E-10 Combat Problems of Student Chemical Use	
F Guidance (5 modules)	F-1 Gather Student Data Using Formal Data-Collection Techniques	F-2 Gather Student Data through Personal Contacts	F-3 Use Conferences to Help Meet Student Needs	F-4 Provide Information on Educational and Career Opportunities	F-5 Assist Students in Applying for Employment or Further Education						
G School-Community Relations (10 modules)	G-1 Develop a School-Community Relations Plan for Your Vocational Program	G-2 Give Presentations to Promote Your Vocational Program	G-3 Develop Brochures to Promote Your Vocational Program	G-4 Prepare Displays to Promote Your Vocational Program	G-5 Prepare News Releases and Articles Concerning Your Vocational Program	G-6 Arrange for Television and Radio Presentations Concerning Your Vocational Program	G-7 Conduct an Open House	G-8 Work with Members of the Community	G-9 Work with State and Local Educators	G-10 Obtain Feedback about Your Vocational Program	
H Vocational Student Organization (6 modules)	H-1 Develop a Personal Philosophy Concerning Vocational Student Organizations	H-2 Establish a Vocational Student Organization	H-3 Prepare Vocational Student Organization Members for Leadership Roles	H-4 Assist Voc. Student Org. Members in Developing and Financing a Yearly Program of Activities	H-5 Supervise Activities of the Vocational Student Organization	H-6 Guide Participation in Vocational Student Organization Contests					
I Professional Role and Development (8 modules)	I-1 Keep Up-to-Date Professionally	I-2 Serve Your Teaching Profession	I-3 Develop an Active Personal Philosophy of Education	I-4 Serve the School and Community	I-5 Obtain a Suitable Teaching Position	I-6 Provide Laboratory Experiences for Prospective Teachers	I-7 Plan the Student Teaching Experience	I-8 Supervise Student Teachers			
J Coordination of Cooperative Education (10 modules)	J-1 Establish Guidelines for Your Cooperative Vocational Program	J-2 Manage the Attendance, Transfers, and Terminations of Co-Op Students	J-3 Enroll Students in Your Co-Op Program	J-4 Secure Training Stations for Your Co-Op Program	J-5 Place Co-Op Students on the Job	J-6 Develop the Training Ability of On-the-Job Instructors	J-7 Coordinate On-the-Job Instruction	J-8 Evaluate Co-Op Students' On-the-Job Performance	J-9 Prepare for Students' Related Instruction	J-10 Supervise an Employer-Employee Appreciation Event	

Competencies for Categories K, L, M, and N on reverse side.

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	Category	Competencies										
K	Implementing Competency-Based Education (CBE) (6 modules)	K-1 Prepare Yourself for CBE	K-2 Organize the Content for a CBE Program	K-3 Organize Your Class and Lab to Install CBE	K-4 Provide Instructional Materials for CBE	K-5 Manage the Daily Routines of Your CBE Program	K-6 Guide Your Students Through the CBE Program					
L	Serving Students with Special/Exceptional Needs (13 modules)	L-1 Prepare Yourself to Serve Exceptional Students	L-2 Identify and Diagnose Exceptional Students	L-3 Plan Instruction for Exceptional Students	L-4 Provide Appropriate Instructional Materials for Exceptional Students	L-5 Modify the Learning Environment for Exceptional Students	L-6 Promote Peer Acceptance of Exceptional Students	L-7 Use Instructional Techniques to Meet the Needs of Exceptional Students	L-8 Improve Your Communication Skills	L-9 Assess the Progress of Exceptional Students	L-10 Counsel Exceptional Students with Personal-Social Problems	L-11 Assist Exceptional Students in Developing Career Planning Skills
	Serving Students with Special/Exceptional Needs (cont'd)	L-12 Prepare Exceptional Students for Employability	L-13 Promote Your Vocational Program with Exceptional Students									
M	Assisting Students in Improving Their Basic Skills (6 modules)	M-1 Assist Students in Achieving Basic Reading Skills	M-2 Assist Students in Developing Technical Reading Skills	M-3 Assist Students in Improving Their Writing Skills	M-4 Assist Students in Improving Their Oral Communication Skills	M-5 Assist Students in Improving Their Math Skills	M-6 Assist Students in Improving Their Survival Skills					
N	Teaching Adults (6 modules)	N-1 Prepare to Work with Adult Learners	N-2 Market the Adult Education Program	N-3 Determine Individual Training Needs	N-4 Plan Instruction for Adults	N-5 Manage the Instructional Process	N-6 Evaluate the Performance of Adults					

Appendix A

DEVELOPMENT OF THE CENTER'S PBTE/CBSD MATERIALS

Development of the PBTE/CBSD materials involved four major phases: (1) identification of important teaching competencies (initial research base), (2) development and testing of curricular materials, (3) dissemination and implementation activities, and (4) additional research and development, plus revision of the original curricular materials. These phases are shown in diagram form in sample 19.

Phases 1–3 resulted in the publication of the 100 modules in the original PBTE/CBSD series. Phase 4 resulted in the publication of an additional 32 PBTE/CBSD modules, as well as revision of the original 100 modules for incremental release in second edition form.

Original PBTE/CBSD Series

Initial research base (384 competencies). Work began with two research projects designed to identify and verify the competencies important to vocational-technical teachers responsible for secondary and two-year postsecondary programs. Approximately 1,100 vocational-technical teachers, supervisors, and teacher educators were involved in this identification/verification effort.

First, the performance elements (competencies) important to teachers in conventional vocational-technical education programs were identified and verified. Conventional programs were defined as secondary and two-year postsecondary programs in seven service areas: agricultural education, business and office education, marketing and distributive education, health occupations education, home economics education, technical education, and trade and industrial education.

Second, the performance elements (competencies) important to teacher-coordinators in cooperative education programs were identified and verified. The cooperative education programs included those available through off-farm agricultural programs, wage-earning home economics programs, office occupations programs, marketing and distribution programs, special needs programs, and trade and industrial programs.

The performance elements in each case were identified through occupational analysis, starting with a literature search and then using introspection and interview techniques. The performance elements were then verified through national critical-incident studies and ratings provided by panels of experts.

For teachers in **conventional programs**, 237 performance elements were initially identified and clustered by staff into ten categories. A 21-member panel of educators representing all seven service areas and 19 states confirmed the relevance of the ten categories, and panel ratings indicated that—

- 94 percent of the performance elements represented *common competencies* (those needed by teachers in two or more of the seven service areas studied), and
- 226 of the performance elements were important to teacher success.

The national critical-incident survey verified the importance of the 226 performance elements and identified an additional 30 important performance elements that needed to be added to the list—a total of 256.

For teachers in **cooperative education programs**, 385 performance elements (including those from the previous study) were initially identified by staff. Ratings provided by the 300 teachers involved in the critical-incident study (50 teachers in each of the six cooperative program areas) indicated that—

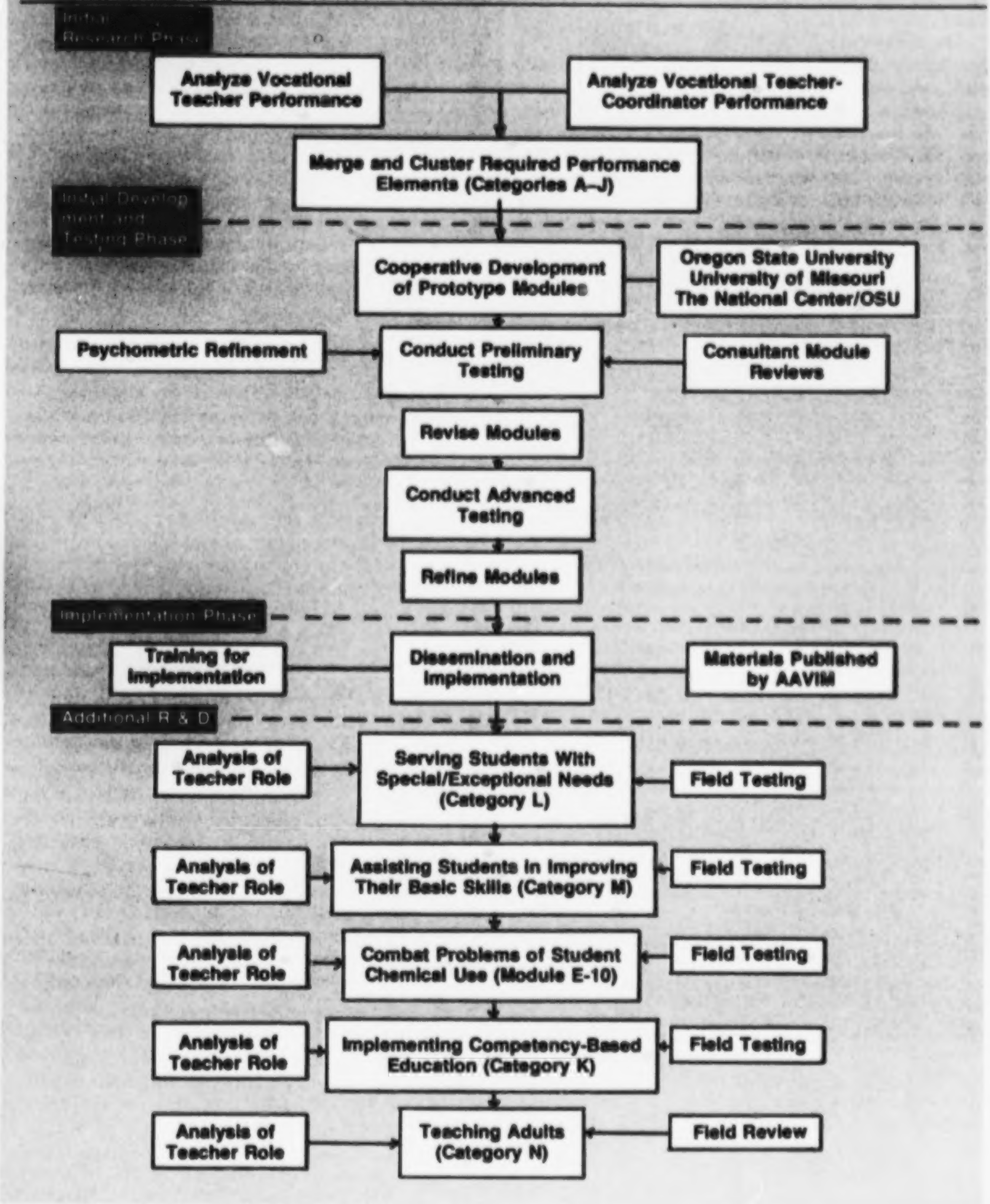
- 92 percent of the performance elements represented *common competencies*, and
- 385 performance elements (100 percent) were important to teacher-coordinator success.

The final step in this phase involved merging the results from the two research studies, which produced a list of 390 performance elements. The list was then refined to eliminate duplication, producing a final list of 384 performance elements, or competencies, clustered into ten professional categories (see appendix B). Finally, a set of performance-oriented general objectives, each specifying the task and the general criteria for evaluating a teacher's performance of the stated task, was developed.

Development of curricular materials. Following the competency identification/verification phase, work was initiated to develop the curricular materials needed to provide training in the competency areas identified. The curricular materials were produced in the form of modules (individual learning packages), each of which had as its base one or more of the 384 competencies, thus providing solid

SAMPLE 19

PHASES OF THE PBTE/CBSD CURRICULA DEVELOPMENT


Initial Research Phase
Analyze Vocational Teacher Performance
Analyze Vocational Teacher-Coordinator Performance
Merge and Cluster Required Performance Elements (Categories A–J)
Initial Development and Testing Phase
Cooperative Development of Prototype Modules
Oregon State University
University of Missouri
The National Center/OSU
Psychometric Refinement
Conduct Preliminary Testing
Consultant Module Reviews
Revise Modules
Conduct Advanced Testing
Refine Modules
Implementation Phase
Training for Implementation
Dissemination and Implementation
Materials Published by AAVIM
Additional R & D
Analysis of Teacher Role
Serving Students With Special/Exceptional Needs (Category L)
Field Testing
Analysis of Teacher Role
Assisting Students in Improving Their Basic Skills (Category M)
Field Testing
Analysis of Teacher Role
Combat Problems of Student Chemical Use (Module E-10)
Field Testing
Analysis of Teacher Role
Implementing Competency-Based Education (Category K)
Field Testing
Analysis of Teacher Role
Teaching Adults (Category N)
Field Review

assurance that the module objectives represented the important skills actually needed by vocational-technical teachers.

To further ensure that the materials would reflect teachers' actual needs and would be acceptable to the field, the module development process was structured to provide maximum involvement of people actively engaged in vocational-technical teacher preparation. Faculty writing teams at two universities (Oregon State University and the University of Missouri–Columbia) drafted the initial set of modules, with a Center staff member on site at each university to facilitate the developmental effort and ensure that faculty from all service areas were represented.

A rigorous system of module development, review, and revision was followed to ensure quality control. Responsibility for developing the proposed **123 modules** was divided between the two universities. After a given module was drafted and approved by faculty at one site, the module was forwarded to faculty at the other site and to Center staff for review and critique. A synthesis of reviews was then developed, and each module was revised by Center staff on that basis. In some cases, revision involved combining modules; as a result, the set of materials prepared for initial testing included **118 modules.**

Preliminary testing and revision. Initial testing of the modules was carried out at Oregon State University, the University of Missouri–Columbia, and Temple University. Each of the 118 modules was used by a minimum of ten preservice and/or inservice vocational-technical teachers at one or more of the test sites. Reaction forms were completed by each teacher for each module used and by each resource person (e.g., faculty member or master teacher) for each module administered. In addition, in-depth taped interviews were conducted with teachers and resource persons for a sampling of the modules tested in order to clarify the written reactions and gain additional feedback.

Concurrent with the preliminary testing effort, psychometric refinement of the objectives and assessment devices for each module was carried out by the California Testing Bureau of McGraw-Hill. In addition, several modules covering specialized skills, as well as several categories of modules, were reviewed and critiqued by independent consultants and subject-matter experts to ensure accuracy and consistency.

Based on all this feedback, it was determined that major revision was needed and that it should involve the following tasks:

- Improving and expanding the directions within each module
- Sequencing module activities and materials from front to back in order of use, rather than presenting all the activity directions first and appending the materials
- Making each module essentially self-contained by developing information sheets to cover all essential information, rather than referring the user to outside references
- Providing alternate activities each time a learning activity required the use of peers in order to allow for the fact that some users might not have ready access to peers
- Providing optional activities for enrichment purposes and to allow the learning experiences to be more easily adapted to meet individual needs
- Adding graphic symbols to help guide the user in working through a module
- Recombining some elements and modules to form more substantive competency clusters and improve articulation among modules

Each module was revised accordingly by Center staff in preparation for advanced testing, and the resulting set of materials included **100 modules.**

Advanced testing and refinement. Advanced testing of the 100 modules was conducted at 18 sites representing a wide range of geographic areas and settings, as well as several different program structures. Feedback was gathered from each individual using the modules and each resource person guiding module use. Over 2,000 pre- and inservice teachers and over 250 resource persons participated in the testing. The resulting data showed the modules, in general, to be highly effective in helping both pre- and inservice teachers to develop the specified competencies.

Following advanced testing, each module was refined in preparation for publication. Few substantive changes were necessary, and most revision involved polishing and editing. Subsequent publication by the American Association for Vocational Instructional Materials (AAVIM) provided the following additional module improvements:

- Several additional illustrations were included in each module.
- Explanatory material common to all modules was moved to the inside back cover of each module.
- Color was used to identify each category, and color screening was used to highlight samples and enliven the illustrations.
- Module content was typeset.
- Modules were saddle-stitched and three-hole punched; pages were perforated for easy removal.

The Expanded Series

Additional research and development. Four new duties of vocational-technical teachers were pinpointed in the years following the development of the original PBTE/CBSD series. Specifically, it became clear that additional training materials were needed to enable vocational-technical teachers and other trainers to do the following:

- Install and manage training programs embodying the principles and concepts of competency-based education (CBE)
- Create learning environments that are accessible, accommodating, and equitable in meeting the instructional needs of students with special/exceptional needs
- Integrate the teaching and reinforcement of basic skills into their regular instruction
- Plan and carry out instruction appropriate for adult learners

In addition, teachers now needed help in learning to combat problems of student chemical use.

In order to develop the materials needed in these areas, staff convened a series of panels of vocational-technical educators with expertise in each of the areas identified. Panel members used a DACUM consensus workshop approach to identify the teacher competencies needed for each area. The competencies were then verified and clustered for materials development purposes. The results of this research were as follows:

- **Category K: Implementing CBE**—A ten-member DACUM panel identified 83 competencies for this duty area; this competency list was merged with a list produced as part of an earlier study, and a final list of 84 competencies was produced and verified (see appendix C). The competencies were clustered into six functional areas for materials development purposes.
- **Category L: Serving Students with Special/Exceptional Needs**—A series of DACUM panels was convened for competency identification. Each panel contained 8–11 experts in serving one type of special/exceptional needs group: persons enrolled in programs nontraditional for their sex, adults requiring retraining, persons with limited English proficiency; members of racial/ethnic minority groups, urban/rural economically disadvantaged, gifted and talented, mentally retarded, and sensory and physically impaired.

  Eight separate lists were produced, with a total of 716 very specific performance elements. A nine-member panel then reviewed the lists to identify common elements. As a result, the eight lists were merged and refined, and the resulting list of 380 performance elements was sent out for verification. Clustering and synthesis of those elements produced a listing of 50 competencies (see appendix D), which were ultimately clustered into 13 functional areas for materials development purposes.
- **Category M: Assisting Students in Improving Their Basic Skills**—A nine-member DACUM panel identified a list of 80 competencies for this duty area; this competency list was refined by staff, and a final list of 85 competencies was produced and verified (see appendix E). The competencies were clustered into six functional areas for materials development purposes.
- **Category N: Teaching Adults**—A nine-member DACUM panel identified a list of 50 competencies for this duty area; this competency list was refined by staff and verified by experts in the field (see appendix F). The competencies were clustered into six functional areas for materials development purposes.
- **Module E-10: Combat Problems of Student Chemical Use**—A seven-member DACUM panel identified a list of 52 very specific performance elements for this task; the list was refined by staff, and a final list of 47 performance elements was produced and verified. Clustering and synthesis of those elements produced a listing of four competencies (see appendix G).

Once developed by staff and selected consultants, Module E-10 and the modules in Categories K–M were field tested at 20 institutions (including secondary schools, two-year postsecondary institutions, and four-year colleges/universities) in 17 states and Canada. The modules in Category N were subjected to extensive field review and critique. The materials were then revised, and the resulting **32 modules** were delivered to AAVIM for publication and distribution.

Revision of the original series. Many of the 100 modules in the original series are in second edition, as is this guide. User feedback from extensive module use, as well as the passage of time, called for the updating of the content, resources, and illustrations in the original materials. In addition, some revisions were necessary in order to make the original materials more consistent with the content of the 32 new modules developed. Finally, effort was made to modify the terminology somewhat in order to make the content more applicable to the wide range of settings in which occupational instructors and trainers are being prepared.

Articulation among competency lists. As each new duty area (Categories K–N) or competency area (Module E-10) was analyzed, the DACUM panelists were asked to identify competencies that (1) were unique to the area being analyzed, (2) were of critical importance to effective teacher performance in that area, and/or (3) required an approach or application that was significantly different from that used by the "regular" vocational-technical teacher. As a result, there is some overlap among the competency lists in appendices B–F.

However, in the development of the new modules and in the revision of the original 100 modules, care was taken to avoid large-scale repetition of content. Content was presented in depth in only one module. If that same content needed to be covered in another module, it was presented only as a reminder, and the reader was referred through a footnote to the module that is the primary source of that information. Or, it was presented only in terms of its unique applications relative to the specific skill in question.

Training for Module Use

Joint dissemination and training activities are conducted by Center staff in cooperation with the publisher (AAVIM) and numerous user institutions, firms, and agencies.

NOTES

Appendix B

MASTER LIST OF PERFORMANCE ELEMENTS FOR MODULE CATEGORIES A–J

A. Program Planning, Development, and Evaluation

1. Organize a steering committee to assist in the preplanning activities of a community survey.
2. Identify the geographical area in which a community survey will be conducted.
3. Obtain administrative approval for conducting a community survey.
4. Solicit assistance of the vocational education personnel from the state department and/or university in conducting a community survey.
5. Adapt existing community survey materials to local needs.
6. Consult the chamber of commerce to identify area employers to be contacted in a community survey.
7. Consult the local office of the U.S. Employment Service to obtain information on manpower trends and needs.
8. Persuade labor representatives to participate in a community survey.
9. Involve the steering committee in conducting a community survey.
10. Recruit teachers and guidance personnel to participate in conducting a community survey.
11. Establish communication with employer representatives who will be involved in a community survey.
12. Devise a plan of activities for the survey staff to follow in conducting a community survey.
13. Publicize the purposes and objectives of a community survey.
14. Orient the survey staff to their duties and responsibilities in collecting occupational data.
15. Direct students in the collection of data for a community survey.
16. Collect occupational data from employers to identify vocational education needs.
17. Collect student occupational interest data to identify vocational education needs.
18. Recommend a vocational education program based on the findings of a community survey.
19. Disseminate the findings of a community survey.
20. Identify the role and function of the advisory committee.
21. Establish the criteria for selection of the advisory committee members.
22. Obtain school board authorization for organizing the advisory committee.
23. Obtain administrative approval of the selected advisory committee members.
24. Publicize to the school and community the establishment of the advisory committee, its members, and its function.
25. Orient the advisory committee members to their role and function.
26. Plan the annual agenda to be considered by the advisory committee.
27. Communicate the date, place, and agenda for the advisory committee meetings to all persons concerned.
28. Invite resource persons who can provide consultation service to attend the advisory committee meetings.
29. Serve as the liaison for the advisory committee and the school administration.
30. Assist in the identification of the school's vocational education purposes and goals.
31. Determine the occupations for which training is to be offered in the vocational education program.
32. Consult the advisory committee in planning an analysis of an occupation.
33. Analyze occupations with the assistance of employers and labor representatives.
34. Identify the competencies needed for entry into an occupation.
35. Describe the occupational standards of performance for each task in an occupation.
36. Assist in writing general objectives for the vocational education program offerings.
37. Develop vocational education offerings by clustering and sequencing related tasks.
38. Identify the knowledge and attitudes required for the performance of each task included in a vocational education offering.
39. Write student performance objectives for the vocational education offering.
40. Consult the advisory committee in developing a long-range program plan for vocational education.
41. Analyze long-range needs for the offerings of the vocational education program.
42. Specify the long-range facility, equipment, and supply needs for the vocational education program.
43. Assist in the preparation of a long-range budget for the vocational education program.
44. Identify the long-range needs for employing faculty for the vocational education program.
45. Assist in preparing the long-range program plan for vocational education.
46. Analyze continual follow-up information on the placement, employment, and training status of each graduate of the vocational education program.
47. Obtain follow-up data from employers of graduates of the vocational education program.
48. Determine the reasons students leave the vocational education program.
49. Review supervisory evaluation reports for assessing the vocational education program.
50. Assess the relevancy of the vocational education offerings.
51. Disseminate a summary of the vocational education program evaluation to administrators, advisory committee members, and members of the board of education.

B. Instructional Planning

52. Review general objectives for the vocational education offerings.
53. Review student performance objectives developed for the vocational education offerings.
54. Sequence student performance objectives for an offering in the vocational education program.
55. Determine student needs and interests.

SOURCE: Calvin J. Cotrell *et al.*, *Model Curricula for Vocational and Technical Teacher Education: Report No. V, General Objectives—Set II* (Columbus, OH: The Center for Vocational Education, The Ohio State University, 1972). See appendix A, p. 47, for additional information on the competency identification process.

56. Involve the students in planning a unit.
57. Select student performance objectives for a unit.
58. Write content outline for a unit.
59. Correlate unit content with on-the-job and/or laboratory experiences.
60. Determine group and individual learning experiences for a unit based on individual differences of students.
61. Select methods of evaluating student performance throughout a unit.
62. Identify the student performance objectives for a lesson.
63. Select teaching techniques for a lesson.
64. Plan the introduction of a lesson.
65. Plan the content of a lesson.
66. Plan the summary of a lesson.
67. Plan student learning experiences for a lesson.
68. Select methods of evaluating students' attainment of specific student performance objectives.
69. Write a lesson plan.
70. Obtain textbook, reference, and other instructional materials.
71. Select tools and/or equipment for a lesson.
72. Assemble consumable supplies for instructional purposes.
73. Develop original instructional materials such as individualized related assignment sheets, transparencies, and charts.
74. Involve students in the preparation of instructional materials.
75. Obtain programmed instructional materials.
76. Prepare instructional materials with a spirit duplicator.
77. Prepare instructional materials with a stencil duplicator.
78. Prepare instructional materials (hard copy and transparency) with a photocopier.

C. Instructional Execution

79. Conduct field trips.
80. Direct students in gathering information from sources in the community.
81. Conduct symposiums.
82. Conduct brainstorming sessions.
83. Direct student presentations.
84. Direct students in instructing other students.
85. Direct simulation techniques.
86. Conduct group supervised study.
87. Direct student laboratory experience.
88. Direct students in applying problem-solving techniques.
89. Present information through case study problems.
90. Present information by the project method.
91. Direct student study of textbooks, bulletins, and pamphlets.
92. Direct student study of information and assignment sheets.
93. Direct students in preparing laboratory work or job plans.
94. Guide student progress through the use of operation and/or job sheets.
95. Lead group discussions.
96. Conduct panel discussions.
97. Conduct buzz groups.
98. Employ the question box technique.
99. Employ role-playing techniques.
100. Introduce a lesson.
101. Obtain summary for a lesson.
102. Employ oral questioning techniques.
103. Acknowledge student verbal and nonverbal cues.
104. Enrich instruction to challenge the abilities of the more capable student.
105. Reinforce learning.
106. Provide remedial work for slow learners.
107. Employ reward techniques.
108. Establish frames of reference to enable the students to understand a situation from several points of view.
109. Apply nonverbal techniques.
110. Demonstrate a manipulative skill.
111. Present a concept or principle through a demonstration.
112. Give a lecture.
113. Give an illustrated talk.
114. Present information with analogies.
115. Present information by use of individualized instruction.
116. Present information through team teaching.
117. Give an assignment.
118. Present information with the assistance of a resource person.
119. Present information with bulletin boards.
120. Present information with exhibits.
121. Illustrate with models and real objects.
122. Present information with an overhead projector.
123. Present information with an opaque projector.
124. Present information with filmstrips.
125. Present information with slides.
126. Present information with sound motion pictures.
127. Present information with single concept films.
128. Present information with an audio recorder.
129. Present information with a video recorder or closed circuit television.
130. Present information with a tele-lecture.
131. Present information with a record player.
132. Present information with educational television.
133. Direct teaching-machine programmed instruction.
134. Present information by computer-assisted instruction.
135. Direct written programmed instruction.
136. Present information with the aid of a flannel board.
137. Present information with the aid of a flip chart.
138. Present information with the aid of a chalkboard.

D. Instructional Evaluation

139. Establish criteria for student performance.
140. Formulate a system of grading consistent with school policy.
141. Appraise students' products according to occupational performance standards.
142. Appraise students' performance in relation to student performance objectives.
143. Evaluate individualized assignments completed under directed study.
144. Devise self-evaluation techniques for use by students.
145. Arrange for students to evaluate their own progress.
146. Engage in cooperative evaluation of achievement with students.
147. Determine students' grades based on related instruction and laboratory or on-the-job experience.
148. Interpret students' evaluation of instruction.
149. Formulate essay test items.
150. Formulate true-false test items.
151. Formulate completion test items.
152. Formulate matching test items.
153. Formulate multiple-choice test items.
154. Devise laboratory performance tests.
155. Devise laboratory performance rating sheets.
156. Formulate test items for an oral test.
157. Administer teacher-made tests.
158. Devise case study problems.
159. Analyze tests for validity.
160. Analyze tests for reliability.
161. Review student progress and/or achievement records to assess effectiveness of instruction.

162. Involve students in formulating the procedures for their participation in the evaluation of instruction.
163. Obtain information from fellow teachers and supervisory personnel regarding the quality of one's instruction.
164. Seek opportunities for self-evaluation of instruction.

E. Instructional Management

165. Compile a list of supplies needed for the academic year.
166. Identify new tools and/or equipment needed for the academic year.
167. Recommend reference books and periodicals related to vocational education that should be added to the library.
168. Prepare a capital outlay budget proposal for new equipment.
169. Plan an operating budget proposal for consumable supplies, services, and instructional materials.
170. Prepare a budget for estimating travel expenses incurred in vocational activities.
171. Arrange for additional vocational facilities to accommodate expanded enrollments and technological advancements.
172. Prepare purchase requests for approved vocational equipment and supplies.
173. Design a procedure for acquiring needed consumable supplies and materials.
174. Accept gifts or donations of supplies and equipment for the vocational education program in accordance with school policy.
175. Devise a system for determining and collecting student fees for consumable supplies.
176. Structure a filing system for records and report forms.
177. Supply the data for vocational reports required by the state department of education.
178. Devise a filing system for instructional materials.
179. Devise a system for maintaining occupational opportunity information for use by vocational students.
180. Record vocational student attendance according to school policy.
181. Record vocational students' grades according to school policy.
182. Assemble individual student files documenting personal characteristics, attitudes, and grades.
183. Provide approved safety apparel and devices for vocational students assigned to hazardous equipment.
184. Establish a procedure for attending to the first aid needs of vocational students.
185. Maintain a record of safety instruction presented in compliance with safety laws and regulations.
186. Uphold school standards of expected student behavior.
187. Formulate with students acceptable standards of behavior in vocational classrooms and laboratories.
188. Uphold acceptable standards of student behavior in vocational classrooms and laboratories.
189. Carry out approved disciplinary action when warranted.
190. Encourage students to exercise self-discipline.
191. Control outbursts of fighting and aggressive behavior.
192. Maintain an inventory of vocational tools, supplies, and equipment.
193. Establish a system for repairing and servicing tools and equipment in the laboratory.
194. Arrange for the storage and security of supplies and equipment.
195. Implement student check-out procedures for tools, supplies, and equipment used in the laboratory.
196. Direct students in a system for cleaning and maintaining the laboratory.
197. Schedule laboratory equipment for maximum utilization by students.
198. Arrange layout of the vocational laboratory to simulate the occupational environment.
199. Arrange laboratory work areas and storage space to facilitate student work performance.
200. Control heat, light, and ventilation in vocational laboratories and classrooms.
201. Establish a policy for use of the physical facilities and equipment by other school personnel and outside groups.

F. Guidance

202. Determine students' background and environment.
203. Administer subject matter diagnostic tests.
204. Analyze students' cumulative records.
205. Maintain anecdotal records.
206. Determine relationships among students through the sociogram or other sociometric techniques.
207. Review students' autobiographies for information to aid in understanding the students.
208. Assemble information for case study reports.
209. Communicate with prospective and continuing students during the summer.
210. Maintain an open door policy for student consultation.
211. Encourage students to discuss career aspirations.
212. Demonstrate a regard for, and an interest in, students as individuals.
213. Develop constructive working relationships among students.
214. Demonstrate personal concern for the student and his family.
215. Conduct home visits.
216. Recognize potential problems of students.
217. Conduct a conference with a student.
218. Conduct group conferences.
219. Confer with the student and his/her parents regarding his/her educational development.
220. Interpret occupational tests and inventories to students.
221. Assist students in developing good study habits.
222. Establish communication patterns for exchanging information and for cooperating with the guidance staff.
223. Supply guidance staff with performance data about students.
224. Refer students to guidance staff and other specialists.
225. Assist students with their problems by working cooperatively with outside agencies such as health and welfare services.
226. Work with other teachers to help students with individual concerns.
227. Refer students to qualified resource persons for occupational and educational information.
228. Arrange with professional staff for administration and interpretation of personality, aptitude, and intelligence tests for specific students.
229. Arrange for the local office of the U.S. Employment Service to administer and interpret the General Aptitude Test Battery.
230. Present information to students on occupational opportunities.
231. Present information to students on advanced training and educational opportunities available to them.
232. Assist students in determining ways to best describe their salable skills.
233. Write letters of recommendation for students.
234. Assist graduating students in preparing for interviews with potential employers.
235. Assist students in securing and completing applications for jobs, scholarships, educational loans, or college admission.

G. School-Community Relations

236. Assist in the development of policies regarding school-community relations.
237. Plan the school-community relations activities for the vocational education program.
238. Procure clearance from the school administration to conduct school-community relations activities related to the vocational education program.
239. Express a philosophy consistent with that of the vocational faculty.
240. Speak to school and community groups about the vocational education program.
241. Provide brochures to inform the school and community about the vocational education program.
242. Provide displays in the school and community about the vocational education program.
243. Prepare news releases and manuscripts on activities of the vocational education program for newspapers and other periodicals.
244. Present activities of the vocational education program on television.
245. Present activities of the vocational education program on radio.
246. Direct student presentations describing activities of the vocational education program.
247. Conduct an open house to familiarize members of the school and community with activities of the vocational education program.
248. Sponsor student-parent activities for the vocational education program.
249. Assist with special community social events.
250. Assist with community business and industry sponsored activities.
251. Serve in professional nonvocational organizations to improve the image of the vocational education program.
252. Serve in a community civic, service, or social organization to improve the image of the vocational education program.
253. Provide consultant services to local business and industry.
254. Maintain liaison with union officials and employers.
255. Maintain liaison with employment agencies.
256. Maintain liaison with community professional, service, fraternal, social, and religious organizations.
257. Maintain good relations with other schools.
258. Maintain liaison with state department personnel.
259. Obtain informal feedback on the vocational education program through contacts with individuals in the school and community.
260. Conduct opinion surveys in the school and community concerning the vocational education program.
261. Analyze enrollment trends to determine student and parent acceptance of the vocational education program.
262. Obtain information from parents relative to their expectations of the vocational education program.
263. Consult the advisory committee to obtain information concerning their expectations of the vocational education program.
264. Acquire information from members of the community power structure (e.g., political, social, and economic pressure groups) regarding their expectations of the vocational education program.
265. Study community voting results on financial issues affecting the vocational education program to determine community support.
266. Study in-school election results (student council, class officers) to determine the image of the vocational students in the school.
267. Maintain working relationships with the school administration and faculty.
268. Assist in planning the goals of the total school program.
269. Maintain working relationships with the school supporting staff through cooperation and mutual effort.

H. Vocational Student Organization

270. Obtain approval from the school administration for establishing the vocational student organization.
271. Contact state department personnel regarding the steps to be followed in organizing a vocational student organization.
272. Acquaint prospective members and their parents with the purposes, activities, and values of the vocational student organization.
273. Organize a student committee to assess student interest in joining a vocational student organization.
274. Assist in the development of a constitution and bylaws for the vocational student organization.
275. Conduct an organizational meeting for a vocational student organization.
276. Direct initiation activities of the vocational student organization.
277. Orient students to the vocational student organization.
278. Assist in the election and installation of officers of the vocational student organization.
279. Conduct a leadership training session for the officers of the vocational student organization.
280. Obtain the assistance of state department personnel in maintenance of the vocational student organization.
281. Assist students in developing a yearly program of work for the vocational student organization.
282. Assist students in advancing within the available degrees in the vocational student organization.
283. Supervise social and educational activities for the vocational student organization.
284. Involve elected chapter parents in the activities of the vocational student organization.
285. Assist students with publicizing the vocational student organization activities.
286. Assist students with the financial management of the vocational student organization.
287. Assist in planning and organizing fund-raising activities for the vocational student organization.
288. Maintain a file of publications available for the vocational student organization.
289. Supervise the development of an annual handbook for the vocational student organization.
290. Supervise the development of a chapter scrapbook for the vocational student organization.
291. Evaluate the vocational student organization.
292. Affiliate the vocational student organization with the state and national vocational organizations.
293. Assist in the preparation of state and national reports for the vocational student organization.
294. Provide advice for student entries in state and national vocational student organization contests.
295. Send student representatives to district, state, regional, and national vocational student organization activities.
296. Assist in the development of rules and procedures for conducting district, state, regional, and national vocational student organization contests.
297. Serve as an advisor or judge for district, state, regional, or national vocational student organization contests.
298. Participate in district, state, regional, and national activities of the vocational student organization.

I. Professional Role and Development

299. Identify current trends of the teaching profession.
300. Promote the attainment of the goals of the teaching profession.
301. Express a personal professional philosophy consistent with the goals of the teaching profession.
302. Express a personal professional philosophy consistent with the goals of vocational education.

303. Maintain the ethical standards expected of a professional educator.

304. Exchange observational visits, innovations, and ideas with others in the profession.

305. Support professional organizations through membership and attendance at meetings.

306. Serve professional organizations as an officer and/or chairperson, or member of a committee.

307. Represent the teaching profession as a committee member, delegate, or program participant at meetings and activities of other related professions.

308. Participate in experimental and other data-collecting research activities.

309. Write an article or book for publication which contributes to the literature of the profession.

310. Assist in orienting teachers who are new to the school system.

311. Work with a team from the school and/or community on pertinent school activities.

312. Serve community needs by contributing professional expertise to community activities.

313. Consult supervisory and administrative evaluations to determine attitudes of others toward one's personal and professional abilities and limitations.

314. Use a self-analysis form to evaluate personal and professional abilities and limitations.

315. Select the teaching position which is in keeping with personal and professional abilities and limitations.

316. Maintain professional certification through enrolling in graduate, extension, and inservice education programs.

317. Expand educational background and leadership potential by achieving advanced degrees.

318. Keep up to date through reading professional literature.

319. Acquire new occupational skills and information needed to keep pace with technological advancement in vocational education.

320. Update professional personnel file regularly.

321. Participate in noninstructional school activities (cafeteria supervision, homeroom, bus duty, chaperoning, etc.).

322. Assist with nonvocational student organization activities.

323. Provide opportunities for potential teachers to observe and participate in the public school program.

324. Interpret the policies and regulations of the local school district to the student teacher.

325. Plan activities for the student teacher which draw upon and enrich college course work.

326. Assign responsibilities commensurate with the student teacher's background of knowledge and experience.

327. Demonstrate instructional techniques for student teachers.

328. Consult regularly with the student teacher regarding planning, implementing, and evaluating teaching.

329. Confer regularly with the student teacher.

330. Confer with the college supervisor and the student teacher regarding plans for, and evaluation of, the total student teaching experience.

J. Coordination of Cooperative Education

331. Establish criteria for selection of student-learners.

332. Provide prospective student-learners with resource materials on occupational opportunities to aid them in selecting a vocation.

333. Administer occupational tests relative to student-learner selection and placement.

334. Gather student-learner selection data.

335. Interview students and parents to obtain student-learner interest and aptitude information.

336. Identify a prospective student-learner on the basis of selection criteria and data.

337. Match a student-learner's unique characteristics with an appropriate training station.

338. Negotiate on-the-job training hours and wages for student-learners.

339. Establish criteria for evaluating the training station potential of a business or industry.

340. Identify prospective cooperating employers to provide on-the-job training stations.

341. Establish criteria to evaluate qualifications of prospective on-the-job instructors.

342. Assess training capability of the on-the-job instructor of the prospective training station.

343. Assess educational adequacy of the prospective training station's facilities and equipment.

344. Assess safety provisions of the facilities and equipment of the prospective training station.

345. Convince an employer to provide a training station for cooperative vocational education.

346. Arrange with a union to make contract provisions for student-learners.

347. Develop a training agreement between student-learner, parent, school, and cooperating employer.

348. Arrange school and work schedules with student-learners and school and employing personnel.

349. Develop a systematic training plan with the cooperating employer and/or the on-the-job instructor.

350. Aid student-learners in procuring work permits.

351. Assist the cooperating employer in obtaining information concerning federal and state wage and hour classifications.

352. Assist the cooperating employer in acquiring a federal permit to pay a training wage.

353. Assist the cooperating employer in verifying the legality of employing a student-learner in a hazardous occupation.

354. Establish the cooperating employer's qualifications for reimbursement for training a student-learner.

355. Obtain reimbursement for the cooperating employer providing on-the-job training.

356. Obtain reimbursement for the student-learner for allowable training costs such as clothing and tools.

357. Prepare the student-learner for an interview with the cooperating employer and training station personnel.

358. Assist the student-learner in on-the-job training orientation.

359. Assist the cooperating employer's personnel in accepting the training status and role of the student-learner.

360. Maintain good working relationships with training station personnel.

361. Develop a procedure to ensure student's safety and protection in the training station.

362. Develop a plan for supervision of on-the-job training.

363. Inform the administration of the coordination itinerary.

364. Assess the on-the-job experience daily reports with the student-learner to plan future instruction.

365. Encourage the on-the-job instructor to follow the training plan in providing experiences for the student-learner.

366. Maintain the student-learner's progress reports for on-the-job training and related instruction.

367. Examine the student-learner's progress reports to determine future on-the-job training experiences and related instruction.

368. Maintain a record of individual work hours, wages, and work experiences of on-the-job training.

369. Assist the student-learner in the solution of problems related to on-the-job training.

370. Control student-learner absenteeism from school and on-the-job training.

371. Control the transfer of student-learners within the cooperative vocational education program and to other school programs.

372. Conduct termination procedures for on-the-job training for the student-learner when conditions demand it.

373. Sponsor an employer-employee appreciation event.

374. Evaluate the student-learner's work qualities and habits on the job.

375. Evaluate the student-learner's personal traits and characteristics on the job.

376. Check the student-learner's progress in acquiring skills on the job.

377. Check the student-learner's progress with the on-the-job instructor and other training station personnel.

378. Assess the student-learner's performance with the assistance of the on-the-job instructor.

379. Obtain suggestions from the on-the-job instructor to guide the selection of lessons for related instruction.

380. Evaluate the quality of the on-the-job training received by the student-learner.

381. Provide a workshop to assist on-the-job instructors in techniques for teaching student-learners.

382. Assist the on-the-job instructor with development of teaching techniques during supervisory visits to the training station.

383. Update related instruction for student-learners on the basis of information on technology obtained from cooperating employers.

384. Obtain information from the advisory committee on ways to improve related instruction and on-the-job training.

Appendix C

MASTER LIST OF PERFORMANCE ELEMENTS FOR MODULE CATEGORY K: Implementing CBE

1. Determine the roles, functions, and characteristics of a CBE teacher and assess your qualifications and willingness to perform in those roles.
2. Observe programs where CBE is being used.
3. Participate in someone else's CBE program as a student.
4. Enroll in courses and workshops covering CBE.
5. Keep up-to-date with what's going on in/with CBE (e.g., by reading the literature, attending conferences).
6. Increase your skills in developing rapport and communicating openly (e.g., with administrators).
7. Provide information to orient administrators to CBE and to the need for alternative grading procedures.
8. Orient advisory committee to CBE and your CBE program.
9. Orient employers to the individualized, competency-based approach.
10. Orient counselors and teachers in feeder schools to the CBE program.
11. Orient the community to competency-based instruction.
12. Promote your CBE program, explaining the advantages of this approach to prospective students.
13. Identify basic materials, equipment, and facilities needed, quantities needed, and their costs and sources.
14. Plan the physical arrangement of facilities and major equipment.
15. Organize a resource center, including provision for storage of software.
16. Provide an environment conducive to viewing media and listening to tapes without distractions.
17. Evaluate the physical placement of equipment and facilities.
18. Arrange for the purchase and/or duplication of multiple copies of materials.
19. Ensure that a relevant record-keeping system exists for CBE (developed statewide, institutionally, or by instructor).
20. Establish a "grading" procedure consistent with CBE and institutional requirements.
21. Determine time periods during which it is reasonable for students to enter the program.
22. Encourage the administration to provide a reasonable student-teacher ratio.
23. Organize field-based instructional settings.
24. Develop a task list.
25. Cluster tasks.
26. Sequence tasks.
27. Secure advisory committee verification of task lists.
28. Determine limits of program content.
29. Assist in determining student selection criteria for your CBE program.
30. Set standards to assess student readiness for exit or advanced placement.
31. Specify levels at which students can enter industry, as correlated with task clusters.
32. Return to industry to ensure that you, as a CBE instructor, can perform the specific skills that are taught in the program.
33. Assess the effectiveness of the way in which tasks are clustered and sequenced.
34. Determine whether instructional materials will be secured elsewhere, adapted, or developed locally.
35. Determine sources of CBE curriculum materials.
36. Modify materials secured from other sources.
37. Develop appropriate instructional materials.
38. Develop skills in writing clear, precise instructional materials that communicate to students.
39. Develop an awareness of how multimedia can be used in the classroom/lab (where each works best, when, etc.).
40. Gain skill in working with a wide variety of media.
41. Establish format for instructional materials.

SOURCE: The competencies on this list were identified, verified, and refined as part of a National Center/OSU project directed by James B. Hamilton; project staff included Lois G. Harrington, Michael E. Wonacott, and Cheryl M. Lowry; Glen E. Fardig of the University of Central Florida served as consultant. The DACUM competency identification panel included the following educators with expertise in implementing competency-based education: Odell Chism, Robert Dubanoski, Neil Reske, Bell Nicholson, Robert Rannells, Richard Sedlacek, William Shoaf, Kris Sitler, Michael Strohaber, and Ann Vescio. See appendix A, p. 50, for additional information on the competency identification process.

42. Establish, for each task, minimal acceptable industry standards to be met.
43. Establish general time lines for completion of individual competencies.
44. Develop assessment devices (skill tests, performance tests, written tests, pre- and post-tests).
45. Identify the learning activities required to learn the task.
46. Design student learning activities.
47. Select materials to support the learning activities specified.
48. Ensure that copyright laws are not violated within locally developed materials or by the reproduction of outside materials.
49. Conduct ongoing evaluation of instructional materials to ensure that they do what they are supposed to do.
50. Assess the readability level of materials for particular students.
51. Assess materials periodically to ensure that the content is up-to-date (e.g., in terms of the tasks covered and references to the resources required).
52. Develop the skills necessary to manage and coordinate multiple, diverse learning activities.
53. Maintain a safe, ordered, yet flexible learning environment (job atmosphere).
54. Function as a learning manager, being willing to let students work on their own, with your trust.
55. Gain skill in using a wide variety of teaching techniques well.
56. Provide for the development of competency-based programs unique to individual student needs.
57. Schedule individual/group learning experiences.
58. Involve students in providing assistance to other students.
59. Coordinate student activities occurring in different areas (learning activities, lab maintenance).
60. Manage the storage and use of CBE materials, equipment, records, and overall inventory of supplies, tools, and other materials.
61. Develop a system for students to check materials in and out as required.
62. Establish student performance data-collection procedures.
63. Provide for continual performance feedback to students.
64. Conduct student performance assessment of occupational competencies.
65. Maintain appropriate individual records of student progress (e.g., start, stop, achievement of competencies).
66. Evaluate your management procedures (e.g., record-keeping, "grading").
67. Orient students to the CBE concepts.
68. Orient students to the assessment system.
69. Orient students to the learning materials.
70. Orient students to their roles and responsibilities in CBE.
71. Orient students to specific skills available through your course.
72. Orient students to the CBE facilities (e.g., resource center, records storage).
73. Assess students to determine needs, abilities, and goals.
74. Assist students in determining whether this specific CBE program is appropriate to their needs, abilities, goals.
75. Work with students to devise individual learning plans (e.g., use of contracts).
76. Develop the counseling skills needed to deal with working with students on a one-on-one, individualized basis.
77. Know when to counsel and when (and where) to refer.
78. Counsel/advise students in self-assessment of their progress through the CBE program.
79. Employ constructive criticism.
80. Sustain motivation by a generous use of praise for a job well done.
81. Encourage open communication such that students feel free to ask for help.
82. Assist students in developing self-motivation.
83. Allow students to experiment, knowing that "failure" at that point can be a learning experience and that they can continue to practice until they succeed.
84. Evaluate student progress.

Appendix D

MASTER LIST OF PERFORMANCE ELEMENTS FOR MODULE CATEGORY L:

Serving Students with Special/Exceptional Needs

1. Define your role in serving exceptional students.
2. Review your attitude toward exceptional students.
3. Improve your knowledge, skills, and experience regarding exceptional students.
4. Identify students who appear to have exceptional needs and abilities.
5. Identify the exceptional needs and abilities of students.
6. Diagnose the specific needs/abilities of students.
7. Interpret results of diagnosis of students' needs/abilities.
8. Gather and interpret basic information about exceptional students.
9. Identify modifications required in program goals and objectives and occupational tasks in light of students' exceptional needs.
10. Prepare a tentative individual training plan.
11. Conduct a planning meeting to finalize the individual training plan.
12. Evaluate instructional materials for bias.
13. Evaluate instructional materials against the capabilities of your exceptional students.
14. Adapt, develop, or select instructional materials for your exceptional students.
15. Consult with students about their exceptional needs and modifications needed in the learning environment.
16. Analyze the learning environment for modifications needed to serve your exceptional students.
17. Make needed modification to the learning environment for exceptional students.
18. Inform students about their peers with special needs.
19. Demonstrate acceptance of students with special needs.
20. Provide activities to allow students to interact, cooperate, and relate to one another.
21. Encourage student support groups.
22. Base the selection of teaching techniques on the general principles of good teaching.
23. Individualize instruction for exceptional students.
24. Reinforce instruction for exceptional students.
25. Use specific activities to remediate, accelerate, and accommodate a variety of student needs.
26. Communicate actively with students.
27. Communicate honestly with students.
28. Communicate fairly with students.
29. Communicate understandably with students.
30. Use assessment techniques appropriate to the exceptional needs of students.
31. Minimize the fear of testing.
32. Record results of assessment of exceptional needs students' progress.
33. Provide frequent and continual feedback to exceptional needs students.
34. Use an appropriate grading system for exceptional needs students.
35. Identify exceptional needs students who need assistance with personal/social problems.
36. Develop rapport with exceptional needs students.
37. Counsel students with specific personal/social problems.
38. Refer students to other professionals if necessary.
39. Assist exceptional needs students in developing decision-making skills.
40. Assist exceptional needs students in increasing self-awareness.
41. Assist exceptional needs students in gaining career awareness.
42. Assist exceptional needs students in setting and accepting realistic career goals and plans.
43. Assure advisory representation with cognizance of the needs of exceptional needs students.
44. Gather specific employment opportunity information for students with exceptional needs.
45. Identify the employability needs of exceptional needs students.
46. Plan techniques to meet the employability needs of exceptional needs students.

SOURCE: The competencies on this list were identified, verified, and refined as part of a National Center/OSU project directed by James B. Hamilton; project staff included Lois G. Harrington, Michael E. Wonacott, Karen M. Quinn, Cheryl M. Lowry, and others. Approximately 80 vocational-technical teachers and supervisors from throughout the United States served on the eight DACUM competency identification panels, one for each of the special/exceptional needs groups included in the study. See appendix A, p. 50, for additional information on the competency identification process.

47. Help students with exceptional needs obtain employment.

48. Identify prospective students with exceptional needs.

49. Select and use appropriate recruitment strategies with students with exceptional needs.

50. Use promotion to gain school and community support and to establish the credibility of your program in preparing students with special needs for employment.

Appendix E

MASTER LIST OF PERFORMANCE ELEMENTS FOR MODULE CATEGORY M: Assisting Students in Improving Their Basic Skills

1. Accept your responsibility for the provision of reading instruction.
2. Identify the reading skills required for entry into the trade/vocation.
3. Assess students' reading abilities.
4. Diagnose students' reading problems and reading levels.
5. Use care in interpreting existing student records.
6. Identify available instructional materials written at the appropriate reading level.
7. Use appropriate support personnel and materials.
8. Demonstrate a positive attitude toward reading.
9. Create a classroom environment conducive to reading.
10. Provide incentives to encourage student improvement.
11. Use students' special vocational interests to motivate them to read.
12. Teach appropriate technical and related vocabulary.
13. Demonstrate practical reading tips (e.g., skimming, pointing, underlining).
14. Develop students' ability to follow written instructions (e.g., have students read instructions and perform a specific series of hands-on activities).
15. Individualize reading instruction (e.g., through the use of modules).
16. Use small groups/pairings in reading activities.
17. Use reading games (e.g., crossword puzzles, word scrambles, word searches).
18. Use audiovisual techniques (e.g., audiotape reading assignments).
19. Assist students in using self-evaluation techniques to determine their reading comprehension.
20. Provide opportunities for the practice and reinforcement of reading.
21. Accept your responsibility for the provision of writing instruction.
22. Identify the writing skills required for entry into the trade/vocation.
23. Assess students' writing abilities.
24. Diagnose students' writing problems (e.g., in spelling, clarity, punctuation, grammar).
25. Provide standards for written materials (e.g., for spelling, clarity, punctuation, grammar).
26. Provide model formats for written materials (e.g., memos, reports, business letters, work orders).
27. Provide vocationally related writing assignments.
28. Assign writing topics related to students' special vocational interests.
29. Encourage student use of appropriate technical and related vocabulary.
30. Individualize writing instruction.
31. Use writing games (e.g., paragraph scrambles).
32. Provide opportunities for students to critique writing samples.
33. Assist students in using self-evaluation techniques to determine their writing ability.
34. Correct students' writing errors (e.g., in spelling, clarity, punctuation, grammar).
35. Accept your responsibility for the provision of oral communication instruction.
36. Identify the oral communication skills required for entry into the trade/vocation.
37. Assess students' oral communication skills (speaking and listening).
38. Diagnose students' oral communication problems (e.g., in grammar, pronunciation, clarity).
39. Teach appropriate technical and related vocabulary.
40. Encourage student use of appropriate technical and related vocabulary.
41. Correct students' errors in speech (e.g., by focusing on one or two errors at a time).
42. Develop students' awareness of body language (nonverbal communication).
43. Use oral questioning techniques.
44. Ask students to repeat written and oral instructions to ensure their understanding.

SOURCE: The competencies on this list were identified, verified, and refined as part of a National Center/OSU project directed by James B. Hamilton; project staff included Lois G. Harrington, Michael E. Wonacott, Catherine C. Fitch, Elizabeth Kendall, and others. The DACUM competency identification panel included the following educators with expertise in assisting students in improving their basic skills: Milton Arnold, Lewis Cain, William Chandler, Jim Frazier, Jackie Marshall, Teresa Paige, Thomas Peterson, Marie Schernitz, and Nancy Underwood. See appendix A, p. 50, for additional information on the competency identification process.

45. Use role-playing techniques to improve oral communication.
46. Use oral communication games (e.g., rumor, one-way communication).
47. Have students give small- and large-group oral presentations.
48. Provide opportunities for students to practice their listening skills.
49. Teach techniques for using the telephone effectively.
50. Provide simulated and real-life opportunities for telephone use.
51. Assist students in using media to evaluate their own performance and progress.
52. Use guest speakers to stimulate student discussion.
53. Encourage students to take advantage of the opportunities for communication available through participation in vocational student organizations.
54. Accept your responsibility for the provision of math instruction.
55. Identify the math skills required for entry into the trade/vocation.
56. Identify the math skills required to succeed in the vocational program.
57. Assess students' math skills.
58. Diagnose students' math deficiencies (e.g., inability to add and subtract).
59. Assess the appropriateness of math-related explanations in your instructional materials.
60. Identify available math-related materials appropriate to students' abilities and your vocational area.
61. Use appropriate support personnel and materials.
62. Teach appropriate technical and related math vocabulary.
63. Individualize math instruction.
64. Use students' special vocational interests to motivate them to develop their math skills.
65. Provide practical math application activities (e.g., computing income tax, balancing checkbook, computing supply orders).
66. Provide simulated and real-life opportunities for math usage (e.g., through business situations).
67. Use audiovisual aids to teach and reinforce math concepts.
68. Use tutors (e.g., students, retirees, volunteers) to aid students in improving math skills.
69. Assist students in using self-evaluation techniques.
70. Accept your responsibility for the provision of survival skills instruction.
71. Assist students in clarifying their values.
72. Assist students in setting realistic short-term and long-term goals.
73. Assist students in developing personal decision-making skills.
74. Assist students in dealing with a multiplicity of adult roles and responsibilities.
75. Promote good safety habits.
76. Assist students in developing appropriate personal hygiene and nutrition habits.
77. Assist students in developing time management skills.
78. Provide opportunities for students to improve their interpersonal relationship skills (e.g., through the vocational student organization).
79. Assist students in developing personal financial skills.
80. Help students to become more knowledgeable consumers.
81. Teach students to use reference books (e.g., telephone book, dictionary, maps, thesaurus).
82. Help students identify, understand, and use sources of career information.
83. Prepare students to find, obtain, retain, and properly exit employment.
84. Assist students in developing an awareness of their legal rights and responsibilities on the job (e.g., knowledge of minimum wage laws).
85. Assist students in developing an awareness of their rights, responsibilities, and benefits as employees (e.g., knowledge of company policy, insurance benefits, and promotion policy).

Appendix F

MASTER LIST OF PERFORMANCE ELEMENTS FOR MODULE CATEGORY N: Teaching Adults

1. Demonstrate knowledge of differences between andragogy and pedagogy.
2. Demonstrate knowledge of factors that motivate adult learners.
3. Demonstrate knowledge of life responsibilities of the adult learner.
4. Analyze own personal development process.
5. Analyze own learning experiences.
6. Analyze own learning styles.
7. Prepare a personal professional development plan.
8. Assess training needs.
9. Develop customized training.
10. Provide for distance learning options.
11. Describe your program.
12. Recruit learners.
13. Monitor learner satisfaction.
14. Assess program outcomes.
15. Report program results (outcomes).
16. Establish external linkages.
17. Establish internal linkages.
18. Identify support services for overcoming barriers.
19. Assess learners' prerequisite skills.
20. Assess learners' prior experiences.
21. Clarify learners' goals.
22. Analyze learners' learning styles.
23. Verify correct placement of learner in training program.
24. Maintain training record and related data.
25. Determine (job-related) learning objectives based on needs assessment.
26. Maintain proper balance between meeting learner needs and content requirements.
27. Employ a variety of instructional techniques.
28. Match instructional techniques to learning styles.
29. Employ instructional strategies to increase learners' confidence.
30. Employ instructional strategies to increase group cohesion.
31. Employ coaching techniques to reinforce learning.
32. Select, develop, or modify materials to meet learners' needs.
33. Employ new educational technology (e.g., interactive video, videotape, computer-assisted instruction).
34. Provide for physiological needs of individual learners.
35. Manage physical environment.
36. Demonstrate sensitivity to sociocultural differences.
37. Demonstrate skill in working with an LEP population.
38. Establish adult-to-adult rapport.
39. Use language relevant and appropriate to the adult learner.
40. Demonstrate acceptance of adult as a learning resource.
41. Relate classroom activities to experiences of learners.
42. Respond to the need of the adult to be independent.
43. Create a participatory environment.
44. Serve as a role model in learning.
45. Adjust pace of instruction to individual learners.
46. Advise learners on career placement.
47. Provide support services.
48. Identify available referral services.
49. Employ collaborative assessment techniques.
50. Conduct follow-up assessment to see if need has been met.

SOURCE: The competencies on this list were identified, verified, and refined as part of a National Center/OSU project directed by Robert E. Norton; project staff included Lois G. Harrington, Catherine C. Fitch, Kathleen Kopp, and David J. Kalamas. The DACUM competency identification panel included the following educators with expertise in teaching adults: Doe Hentschel, David Holmes, Joanne Jorz, Jean Lowe, Jim Menapace, Norma Milanovich, Cuba Miller, Donald Mocker, and Michael A. Spewok. See appendix A, p. 50, for additional information on the competency identification process.

NOTES

Appendix G

MASTER LIST OF PERFORMANCE ELEMENTS FOR MODULE E-10:
Combat Problems of Student Chemical Use

1. Prepare yourself to deal with student use of alcohol and other drugs.
2. Use prevention techniques in dealing with student use of alcohol and other drugs.
3. Use intervention techniques in dealing with student use of alcohol and other drugs.
4. Use support and follow-up techniques in dealing with student use of alcohol and other drugs.

SOURCE: The competencies on this list were identified, verified, and refined as part of a National Center/OSU project directed by James B. Hamilton; project staff included Michael E. Wonacott, Lois G. Harrington, and others. The DACUM competency identification panel included the following educators with expertise in combating problems of student chemical use: Earl Emery, Mari Kaptain, Thomas Lively, Olive Miller, Thomas Murray, William Segelson, and Mike Stecyk. See appendix A, p. 50, for additional information on the competency identification process.

NOTES

Appendix H

MODULE TITLES AND ASSOCIATED PERFORMANCE ELEMENTS

Category A
PROGRAM PLANNING, DEVELOPMENT, AND EVALUATION

Module	Title	Performance Elements
A-1	Prepare for a Community Survey	1–12, 14, 15
A-2	Conduct a Community Survey	13, 16, 17
A-3	Report the Findings of a Community Survey	18, 19
A-4	Organize an Occupational Advisory Committee	20, 24
A-5	Maintain an Occupational Advisory Committee	25, 29
A-6	Develop Program Goals and Objectives	30, 31, 36, 52
A-7	Conduct an Occupational Analysis	32–35
A-8	Develop a Course of Study	34–38
A-9	Develop Long-Range Program Plans	40–45
A-10	Conduct a Student Follow-Up Study	46–48
A-11	Evaluate Your Vocational Program	49–51

Category B
INSTRUCTIONAL PLANNING

Module	Title	Performance Elements
B-1	Determine Needs and Interests of Students	55
B-2	Develop Student Performance Objectives	39, 53, 54
B-3	Develop a Unit of Instruction	56–61
B-4	Develop a Lesson Plan	62–69
B-5	Select Student Instructional Materials	70–72, 75
B-6	Prepare Teacher-Made Instructional Materials	73, 74, 76–78

NOTE: The performance elements for the modules in Categories A–J (with the exception of Module E-10) are listed in appendix B

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Category C
INSTRUCTIONAL EXECUTION

Module	Title	Performance Elements
C-1	Direct Field Trips	79, 80
C-2	Conduct Group Discussions, Panel Discussions, and Symposiums	81, 95, 96
C-3	Employ Brainstorming, Buzz Group, and Question Box Techniques	82, 97, 98
C-4	Direct Students in Instructing Other Students	83, 84
C-5	Employ Simulation Techniques	85, 99
C-6	Guide Student Study	86, 91, 92, 117, 221
C-7	Direct Student Laboratory Experience	87, 93, 94
C-8	Direct Students in Applying Problem-Solving Techniques	88, 89
C-9	Employ the Project Method	90
C-10	Introduce a Lesson	100
C-11	Summarize a Lesson	101
C-12	Employ Oral Questioning Techniques	102
C-13	Employ Reinforcement Techniques	103, 105, 107, 109
C-14	Provide Instruction for Slower and More Capable Learners	104, 106
C-15	Present an Illustrated Talk	108, 112–114
C-16	Demonstrate a Manipulative Skill	110
C-17	Demonstrate a Concept or Principle	111
C-18	Individualize Instruction	115, 143
C-19	Employ the Team Teaching Approach	116
C-20	Use Subject Matter Experts to Present Information	118, 130
C-21	Prepare Bulletin Boards and Exhibits	119, 120
C-22	Present Information with Models, Real Objects, and Flannel Boards	121, 136
C-23	Present Information with Overhead and Opaque Materials	122, 123
C-24	Present Information with Filmstrips and Slides	124, 125
C-25	Present Information with Films	126, 127
C-26	Present Information with Audio Recordings	128, 131
C-27	Present Information with Televised and Videotaped Materials	129, 132
C-28	Employ Programmed Instruction	133, 135
C-29	Present Information with the Chalkboard and Flip Chart	137, 138

NOTE: The performance elements for the modules in Categories A–J (with the exception of Module E-10) are listed in appendix B.

Category D
INSTRUCTIONAL EVALUATION

Module	Title	Performance Elements
D-1	Establish Student Performance Criteria	139
D-2	Assess Student Performance: Knowledge	142, 149–153, 156–160
D-3	Assess Student Performance: Attitudes	142, 149, 156, 158–160
D-4	Assess Student Performance: Skills	141, 142, 144–146, 154, 155, 157, 159, 160
D-5	Determine Student Grades	140, 147
D-6	Evaluate Your Instructional Effectiveness	148, 161–164

Category E
INSTRUCTIONAL MANAGEMENT

Module	Title	Performance Elements
E-1	Project Instructional Resource Needs	165–167
E-2	Manage Your Budgeting and Reporting Responsibilities	168–170, 172–175, 177
E-3	Arrange for Improvement of your Vocational Facilities	171
E-4	Maintain a Filing System	176, 178–182
E-5	Provide for Student Safety	183, 185
E-6	Provide for the First Aid Needs of Students	184
E-7	Assist Students in Developing Self-Discipline	186–191
E-8	Organize the Vocational Laboratory	194, 198, 199
E-9	Manage the Vocational Laboratory	192, 193, 195–197, 200, 201
E-10	Combat Problems of Student Chemical Use	1–4

NOTE: The performance elements for the modules in Categories A–J (with the exception of Module E-10) are listed in appendix B.

The performance elements for Module E-10 are listed in appendix G.

Category F
GUIDANCE

Module	Title	Performance Elements
F-1	Gather Student Data Using Formal Data-Collection Techniques	202–208, 212, 222, 223, 228, 229
F-2	Gather Student Data Through Personal Contacts	209, 212, 214–216, 222, 226
F-3	Use Conferences to Help Meet Student Needs	210–212, 217–220, 222, 224, 225, 227
F-4	Provide Information on Educational and Career Opportunities	212, 213, 222, 230, 231
F-5	Assist Students in Applying for Employment or Further Education	212, 232–235

Category G
SCHOOL-COMMUNITY RELATIONS

Module	Title	Performance Elements
G-1	Develop a School-Community Relations Plan for Your Vocational Program	236–239, 248
G-2	Give Presentations to Promote Your Vocational Program	240, 246
G-3	Develop Brochures to Promote Your Vocational Program	241
G-4	Prepare Displays to Promote Your Vocational Program	242
G-5	Prepare News Releases and Articles Concerning Your Vocational Program	243
G-6	Arrange for Television and Radio Presentations Concerning Your Vocational Program	244, 245
G-7	Conduct an Open House	247
G-8	Work with Members of the Community	249–256
G-9	Work with State and Local Educators	257, 258, 267–269
G-10	Obtain Feedback about Your Vocational Program	259–266

NOTE: The performance elements for the modules in Categories A–J (with the exception of Module E-10) are listed in appendix B.

Category H
VOCATIONAL STUDENT ORGANIZATION

Module	Title	Performance Elements
H-1	Develop a Personal Philosophy Concerning Vocational Student Organizations	270
H-2	Establish a Vocational Student Organization	270–275, 277, 280, 292
H-3	Prepare Vocational Student Organization Members for Leadership Roles	276, 278, 279, 282, 295
H-4	Assist Vocational Student Organization Members in Developing and Financing a Yearly Program of Activities	281, 286, 287, 289
H-5	Supervise Activities of the Vocational Student Organization	283–285, 288, 290, 291, 293, 298
H-6	Guide Participation in Vocational Student Organization Contests	294–297

Category I
PROFESSIONAL ROLE AND DEVELOPMENT

Module	Title	Professional Elements
I-1	Keep Up-to-date Professionally	299, 304, 318, 319
I-2	Serve Your Teaching Profession	300, 305–309
I-3	Develop an Active Personal Philosophy of Education	301–303
I-4	Serve the School and Community	310–312, 321, 322
I-5	Obtain a Suitable Teaching Position	313–317, 320
I-6	Provide Laboratory Experiences for Prospective Teachers	323, 325
I-7	Plan the Student Teaching Experience	324–326, 330
I-8	Supervise Student Teachers	327–329

NOTE: The performance elements for the modules in Categories A–J (with the exception of Module E-10) are listed in appendix B.

Category J
COORDINATION OF COOPERATIVE EDUCATION

Module	Title	Performance Elements
J-1	Establish Guidelines for Your Cooperative Vocational Program	331, 339, 341, 354–356
J-2	Manage the Attendance, Transfers, and Terminations of Co-op Students	370–372
J-3	Enroll Students in Your Co-op Program	332–336
J-4	Secure Training Stations for Your Co-op Program	337, 340, 342–345
J-5	Place Co-op Students on the Job	337, 338, 346–353, 357
J-6	Develop the Training Ability of On-the-Job Instructors	359, 360, 365, 380–382
J-7	Coordinate On-the-Job Instruction	358, 361–364, 366–369
J-8	Evaluate Co-op Students' On-the-Job Performance	374–378
J-9	Prepare for Students' Related Instruction	379, 383, 384
J-10	Supervise an Employer-Employee Appreciation Event	373

Category K
IMPLEMENTING COMPETENCY-BASED EDUCATION (CBE)

Module	Title	Performance Elements
K-1	Prepare Yourself for CBE	1–12
K-2	Organize the Content for a CBE Program	24–33
K-3	Organize Your Class and Lab to Install CBE	13–23
K-4	Provide Instructional Materials for CBE	34–51
K-5	Manage the Daily Routines of Your CBE Program	52–66
K-6	Guide Your Students Through the CBE Program	67–84

NOTE: The performance elements for the modules in Categories A–J (with the exception of Module E-10) are listed in appendix B. The performance elements for Category K are listed in appendix C.

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Category L
SERVING STUDENTS WITH SPECIAL/EXCEPTIONAL NEEDS

Module	Title	Performance Elements
L-1	Prepare Yourself to Serve Exceptional Students	1–3
L-2	Identify and Diagnose Exceptional Students	4–7
L-3	Plan Instruction for Exceptional Students	8–10
L-4	Provide Appropriate Instructional Materials for Exceptional Students	11–13
L-5	Modify the Learning Environment for Exceptional Students	14–16
L-6	Promote Peer Acceptance of Exceptional Students	17–20
L-7	Use Instructional Techniques to Meet the Needs of Exceptional Students	21–25
L-8	Improve Your Communication Skills	26–29
L-9	Assess the Progress of Exceptional Students	30–34
L-10	Counsel Exceptional Students with Personal-Social Problems	35–38
L-11	Assist Exceptional Students in Developing Career Planning Skills	39–42
L-12	Prepare Exceptional Students for Employability	43–47
L-13	Promote Your Vocational Program with Exceptional Students	48–50

Category M
ASSISTING STUDENTS IN IMPROVING THEIR BASIC SKILLS

Module	Title	Performance Elements
M-1	Assist Students in Achieving Basic Reading Skills	1, 3–5, 8–10, 13, 15–20
M-2	Assist Students in Developing Technical Reading Skills	2, 6, 7, 11, 12, 14
M-3	Assist Students in Improving Their Writing Skills	21–34
M-4	Assist Students in Improving Their Oral Communication Skills	35–53
M-5	Assist Students in Improving Their Math Skills	54–69
M-6	Assist Students in Improving Their Survival Skills	70–85

NOTE: The performance elements for the Category L are listed in appendix D.

The performance elements for Category M are listed in appendix E.

Category N
TEACHING ADULTS

Module	Title	Performance Elements
N-1	Prepare to Work with Adult Learners	1–7
N-2	Market an Adult Education Program	8–18
N-3	Determine Individual Training Needs	19–24
N-4	Plan Instruction for Adults	25–26
N-5	Manage the Adult Instructional Process	27–48
N-6	Evaluate the Performance of Adults	49–50

NOTE: The performance elements for Category N are listed in appendix F.

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Appendix I

TIME ESTIMATES FOR COMPLETION OF THE PBTE/CBSD MODULES

The figures shown under each module number represent the percentages of teacher trainees completing the module in the time ranges shown during advanced testing of the original 100 modules in Categories A–J. These self-estimates of time were made by preservice and inservice teacher trainees upon completion of the field-test version of each individual module and in response to the question, "Approximately how much time (in hours) did you spend completing this module?"

It should be noted that, in some cases, field testing involved completion of the module only up to the final learning experience because the learners did not have immediate access to the actual teaching situation required for the final experience or because actual performance during the field-test time period was impractical for some other reason.

Thus, the time required to fully complete all learning experiences may be somewhat longer than the times listed. In fact, for modules involving such tasks as conducting a community survey, the time needed to complete all the learning experiences might be substantially longer than the time listed.

It should also be noted that the time requirements for inservice teachers to complete specific modules vary widely to the degree that previous work contributes toward module requirements.

CATEGORY A: PROGRAM PLANNING, DEVELOPMENT, AND EVALUATION

HOURS	A-1	A-2	A-3	A-4	A-5	A-6	A-7	A-8	A-9	A-10	A-11
0–1	4.5	31.6	10.5	21.1	3.0	10.0	7.1	5.4	15.4	—	3.7
2–3	59.1	5.3	21.1	47.4	57.6	70.0	19.6	24.3	46.2	41.2	70.4
4–6	18.2	15.8	15.8	22.4	27.3	15.0	25.0	27.0	26.9	17.6	11.1
7–10	18.2	10.5	5.3	6.6	3.0	5.0	17.9	24.3	11.5	17.6	3.7
11–15	—	5.3	15.8	1.3	3.0	—	14.3	8.1	—	17.6	11.1
16+	—	31.6	31.6	1.3	6.1	—	16.1	10.8	—	5.9	—

CATEGORY B: INSTRUCTIONAL PLANNING

HOURS	B-1	B-2	B-3	B-4	B-5	B-6
0–1	15.0	12.2	9.0	9.4	21.8	30.0
2–3	40.9	33.8	36.7	36.3	43.6	41.7
4–6	33.9	29.7	28.8	31.1	28.2	20.0
7–10	7.1	18.9	13.0	16.2	5.1	6.7
11–15	1.6	2.7	8.5	3.4	1.3	1.7
16+	1.6	2.7	4.0	3.7	—	—

CATEGORY C: INSTRUCTIONAL EXECUTION

HOURS	C-1	C-2	C-3	C-4	C-5	C-6	C-7	C-8	C-9	C-10	C-11
0–1	14.3	10.1	34.8	6.5	11.1	7.7	10.6	25.4	22.8	15.2	19.5
2–3	35.7	52.2	39.4	41.9	30.6	43.6	41.5	52.4	35.1	49.2	47.3
4–6	28.6	30.4	19.7	27.4	33.3	33.3	24.6	15.9	28.1	20.8	23.8
7–10	14.3	2.9	4.5	11.3	22.2	5.1	16.2	4.8	8.8	9.1	6.6
11–15	7.1	2.9	—	4.8	—	2.6	2.8	1.6	1.8	3.0	2.3
16+	—	1.4	1.5	8.1	2.8	7.7	4.2	—	3.5	2.5	0.4

HOURS	C-12	C-13	C-14	C-15	C-16	C-17	C-18	C-19	C-20	C-21	C-22
0–1	12.7	18.9	15.1	14.1	8.6	9.8	12.0	20.0	5.0	6.2	8.9
2–3	41.5	46.9	46.2	46.5	37.5	41.5	44.0	61.8	50.0	34.5	39.2
4–6	33.8	25.2	24.4	25.3	41.4	32.5	26.0	14.5	20.0	35.4	31.6
7–10	9.9	6.3	10.1	10.1	7.3	11.4	11.0	—	15.0	13.3	12.7
11–15	0.7	1.4	2.5	3.0	3.4	1.6	5.0	—	—	8.0	1.3
16+	1.4	1.4	1.7	1.0	1.7	3.3	2.0	3.6	10.0	2.7	6.3

HOURS	C-23	C-24	C-25	C-26	C-27	C-28	C-29
0–1	19.0	10.8	11.3	20.8	20.0	15.2	23.8
2–3	44.0	50.8	41.5	54.2	46.7	51.5	33.3
4–6	27.4	26.2	34.0	16.7	26.7	24.2	28.6
7–10	7.1	7.7	9.4	4.2	—	9.1	11.1
11–15	2.4	3.1	1.9	—	6.7	—	1.6
16+	—	1.5	1.9	4.2	—	—	1.6

CATEGORY D: INSTRUCTIONAL EVALUATION

HOURS	D-1	D-2	D-3	D-4	D-5	D-6
0–1	12.7	1.2	3.4	6.5	15.8	19.3
2–3	36.5	22.5	43.1	49.5	49.6	48.9
4–6	39.7	38.7	34.5	30.8	23.0	25.0
7–10	3.2	17.5	13.8	8.4	5.0	4.5
11–15	4.8	11.2	1.7	3.7	6.5	—
16+	3.2	8.7	3.4	0.9	—	—

CATEGORY E: INSTRUCTIONAL MANAGEMENT

HOURS	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9
0–1	14.3	17.4	3.7	48.1	9.6	13.8	26.9	23.7	35.0
2–3	61.9	65.2	85.2	51.9	49.1	53.8	38.1	50.0	45.0
4–6	19.0	13.0	7.4	—	25.4	21.5	23.9	18.4	17.5
7–10	—	4.3	3.7	—	10.5	9.2	5.2	2.6	2.5
11–15	4.8	—	—	—	3.5	1.5	2.2	—	—
16+	—	—	—	—	1.8	—	3.7	5.3	—

CATEGORY F: GUIDANCE

HOURS	F-1	F-2	F-3	F-4	F-5
0–1	12.7	14.8	21.4	5.7	5.9
2–3	41.8	37.0	47.6	47.2	[illegible]
4–6	25.3	22.2	19.0	34.0	41.2
7–10	12.7	18.5	7.1	13.2	8.8
11–15	3.8	3.7	4.8	—	2.9
16+	3.8	3.7	—	—	—

CATEGORY G: SCHOOL-COMMUNITY RELATIONS

HOURS	G-1	G-2	G-3	G-4	G-5	G-6	G-7	G-8	G-9	G-10
0–1	9.1	—	16.7	10.5	11.8	—	—	4.5	16.7	5.0
2–3	22.7	56.3	30.0	36.8	35.3	30.8	45.5	18.2	75.0	40.0
4–6	27.3	31.3	16.7	10.5	23.5	46.2	31.8	40.9	8.3	50.0
7–10	27.3	12.5	16.7	—	8.8	23.1	13.6	22.7	—	5.0
11–15	4.5	—	—	31.6	8.8	—	4.5	9.1	—	—
16+	9.1	—	20.0	10.5	11.8	—	4.5	4.5	—	—

CATEGORY H: VOCATIONAL STUDENT ORGANIZATION

HOURS	H-1	H-2	H-3	H-4	H-5
0–1	9.5	28.0	25.8	32.3	8.3
2–3	45.2	36.0	45.2	38.7	16.7
4–6	23.8	12.0	3.2	6.5	25.0
7–10	21.4	12.0	19.4	6.5	41.7
11–15	—	8.0	6.5	16.1	8.3
16+	—	4.0	—	—	—

CATEGORY I: PROFESSIONAL ROLE AND DEVELOPMENT

HOURS	I-1	I-2	I-3	I-4	I-5	I-6	I-7	I-8
0–1	11.1	32.1	4.8	21.1	13.8	8.8	18.9	18.5
2–3	43.2	57.1	21.0	42.1	44.8	36.8	34.0	51.9
4–6	34.6	7.1	36.2	21.1	27.6	26.3	26.4	16.7
7–10	3.7	3.6	23.8	5.3	13.8	14.0	18.9	11.1
11–15	1.2	—	5.7	10.5	—	3.5	—	1.9
16+	6.2	—	8.6	—	—	10.5	1.9	—

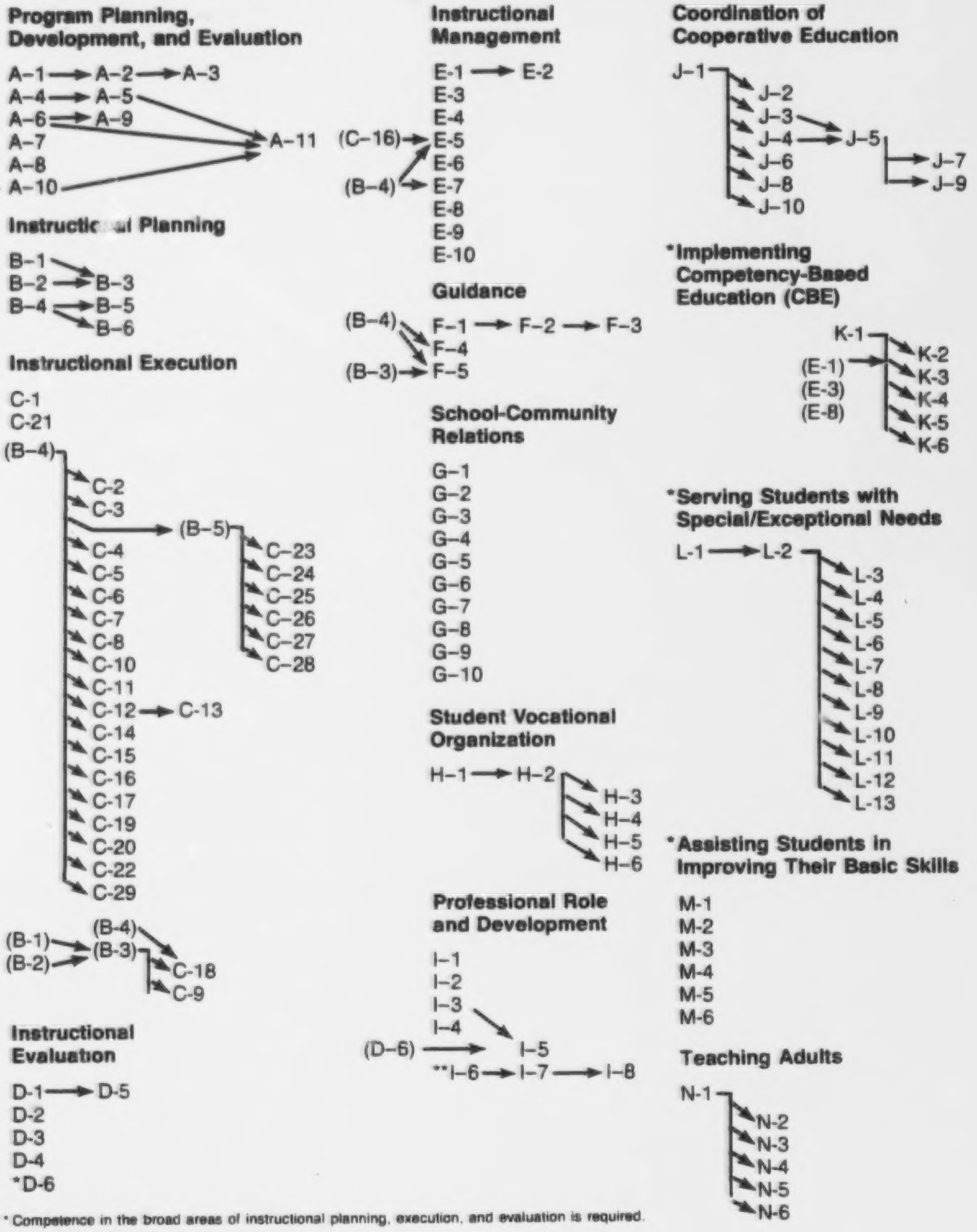
CATEGORY J: COORDINATION OF COOPERATIVE EDUCATION

HOURS	J-1	J-2	J-3	J-4	J-5	J-6	J-7	J-8	J-9	J-10
0–1	6.5	8.5	3.2	9.1	12.7	10.6	11.6	23.3	9.4	27.8
2–3	58.7	57.4	32.3	40.9	42.9	61.7	39.5	56.7	71.9	63.9
4–6	23.9	21.3	41.9	31.8	19.0	21.3	37.2	16.7	18.8	5.6
7–10	8.7	10.6	12.9	11.4	12.7	6.4	9.3	3.3	—	2.8
11–15	2.2	—	3.2	2.3	6.3	—	2.3	—	—	—
16+	—	2.1	6.5	4.5	6.3	—	—	—	—	—

NOTES

Prerequisite Competencies for the Center's PBTE Modules

Modules shown before the arrow (→) are prerequisite to modules to which the arrow points. Module numbers within parentheses ( ) indicate prerequisites from other module categories.



* Competence in the broad areas of instructional planning, execution, and evaluation is required.

** Teaching experience is prerequisite.

Titles of the Center's Performance-Based Teacher Education Modules

Category A: Program Planning, Development, and Evaluation
A-1 Prepare for a Community Survey
A-2 Conduct a Community Survey
A-3 Report the Findings of a Community Survey
A-4 Organize an Occupational Advisory Committee
A-5 Maintain an Occupational Advisory Committee
A-6 Develop Program Goals and Objectives
A-7 Conduct an Occupational Analysis
A-8 Develop a Course of Study
A-9 Develop Long-Range Program Plans
A-10 Conduct a Student Follow-Up Study
A-11 Evaluate Your Vocational Program

Category B: Instructional Planning
B-1 Determine Needs and Interests of Students
B-2 Develop Student Performance Objectives
B-3 Develop a Unit of Instruction
B-4 Develop a Lesson Plan
B-5 Select Student Instructional Materials
B-6 Prepare Teacher-Made Instructional Materials

Category C: Instructional Execution
C-1 Direct Field Trips
C-2 Conduct Group Discussions, Panel Discussions, and Symposiums
C-3 Employ Brainstorming, Buzz Group, and Question Box Techniques
C-4 Direct Students in Instructing Other Students
C-5 Employ Simulation Techniques
C-6 Guide Student Study
C-7 Direct Student Laboratory Experience
C-8 Direct Students in Applying Problem-Solving Techniques
C-9 Employ the Project Method
C-10 Introduce a Lesson
C-11 Summarize a Lesson
C-12 Employ Oral Questioning Techniques
C-13 Employ Reinforcement Techniques
C-14 Provide Instruction for Slower and More Capable Learners
C-15 Present an Illustrated Talk
C-16 Demonstrate a Manipulative Skill
C-17 Demonstrate a Concept or Principle
C-18 Individualize Instruction
C-19 Employ the Team Teaching Approach
C-20 Use Subject Matter Experts to Present Information
C-21 Prepare Bulletin Boards and Exhibits
C-22 Present Information with Models, Real Objects, and Flannel Boards
C-23 Present Information with Overhead and Opaque Materials
C-24 Present Information with Filmstrips and Slides
C-25 Present Information with Films
C-26 Present Information with Audio Recordings
C-27 Present Information with Televised and Videotaped Materials
C-28 Employ Programmed Instruction
C-29 Present Information with the Chalkboard and Flip Chart

Category D: Instructional Evaluation
D-1 Establish Student Performance Criteria
D-2 Assess Student Performance: Knowledge
D-3 Assess Student Performance: Attitudes
D-4 Assess Student Performance: Skills
D-5 Determine Student Grades
D-6 Evaluate Your Instructional Effectiveness

Category E: Instructional Management
E-1 Project Instructional Resource Needs
E-2 Manage Your Budgeting and Reporting Responsibilities
E-3 Arrange for Improvement of Your Vocational Facilities
E-4 Maintain a Filing System
E-5 Provide for Student Safety
E-6 Provide for the First Aid Needs of Students
E-7 Assist Students in Developing Self-Discipline
E-8 Organize the Vocational Laboratory
E-9 Manage the Vocational Laboratory
E-10 Combat Problems of Student Chemical Use

Category F: Guidance
F-1 Gather Student Data Using Formal Data-Collection Techniques
F-2 Gather Student Data Through Personal Contacts
F-3 Use Conferences to Help Meet Student Needs
F-4 Provide Information on Educational and Career Opportunities
F-5 Assist Students in Applying for Employment or Further Education

Category G: School-Community Relations
G-1 Develop a School-Community Relations Plan for Your Vocational Program
G-2 Give Presentations to Promote Your Vocational Program
G-3 Develop Brochures to Promote Your Vocational Program
G-4 Prepare Displays to Promote Your Vocational Program
G-5 Prepare News Releases and Articles Concerning Your Vocational Program
G-6 Arrange for Television and Radio Presentations Concerning Your Vocational Program
G-7 Conduct an Open House
G-8 Work with Members of the Community
G-9 Work with State and Local Educators
G-10 Obtain Feedback about Your Vocational Program

Category H: Vocational Student Organization
H-1 Develop a Personal Philosophy Concerning Vocational Student Organizations
H-2 Establish a Vocational Student Organization
H-3 Prepare Vocational Student Organization Members for Leadership Roles
H-4 Assist Vocational Student Organization Members in Developing and Financing a Yearly Program of Activities
H-5 Supervise Activities of the Vocational Student Organization
H-6 Guide Participation in Vocational Student Organization Contests

Category I: Professional Role and Development
I-1 Keep Up-to-date Professionally
I-2 Serve Your Teaching Profession
I-3 Develop an Active Personal Philosophy of Education
I-4 Serve the School and Community
I-5 Obtain a Suitable Teaching Position
I-6 Provide Laboratory Experiences for Prospective Teachers
I-7 Plan the Student Teaching Experience
I-8 Supervise Student Teachers

Category J: Coordination of Cooperative Education
J-1 Establish Guidelines for Your Cooperative Vocational Program
J-2 Manage the Attendance, Transfers, and Terminations of Co-op Students
J-3 Enroll Students in Your Co-op Program
J-4 Secure Training Stations for Your Co-op Program
J-5 Place Co-op Students on the Job
J-6 Develop the Training Ability of On-the-Job Instructors
J-7 Coordinate On-the-Job Instruction
J-8 Evaluate Co-op Students' On-the-Job Performance
J-9 Prepare for Students' Related Instruction
J-10 Supervise an Employer-Employee Appreciation Event

Category K: Implementing Competency-Based Education (CBE)
K-1 Prepare Yourself for CBE
K-2 Organize the Content for a CBE Program
K-3 Organize Your Class and Lab to Install CBE
K-4 Provide Instructional Materials for CBE
K-5 Manage the Daily Routines of Your CBE Program
K-6 Guide Your Students Through the CBE Program

Category L: Serving Students with Special/Exceptional Needs
L-1 Prepare Yourself to Serve Exceptional Students
L-2 Identify and Diagnose Exceptional Students
L-3 Plan Instruction for Exceptional Students
L-4 Provide Appropriate Instructional Materials for Exceptional Students
L-5 Modify the Learning Environment for Exceptional Students
L-6 Promote Peer Acceptance of Exceptional Students
L-7 Use Instructional Techniques to Meet the Needs of Exceptional Students
L-8 Improve Your Communication Skills
L-9 Assess the Progress of Exceptional Students
L-10 Counsel Exceptional Students with Personal-Social Problems
L-11 Assist Exceptional Students in Developing Career Planning Skills
L-12 Prepare Exceptional Students for Employability
L-13 Promote Your Vocational Program with Exceptional Students

Category M: Assisting Students in Improving Their Basic Skills
M-1 Assist Students in Achieving Basic Reading Skills
M-2 Assist Students in Developing Technical Reading Skills
M-3 Assist Students in Improving Their Writing Skills
M-4 Assist Students in Improving Their Oral Communication Skills
M-5 Assist Students in Improving Their Math Skills
M-6 Assist Students in Improving Their Survival Skills

Category N: Teaching Adults
N-1 Prepare to Work with Adult Learners
N-2 Market an Adult Education Program
N-3 Determine Individual Training Needs
N-4 Plan Instruction for Adults
N-5 Manage the Adult Instructional Process
N-6 Evaluate the Performance of Adults

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